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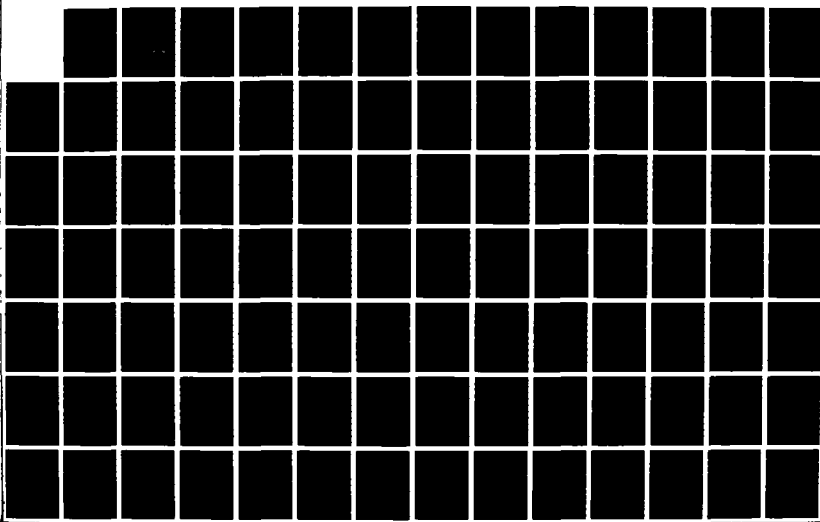
A STUDY TO DESIGN A FUNCTIONAL SPACE UTILIZATION
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AND CLINICAL INVESTIGATION ACTIVITY F... D J BRUSS
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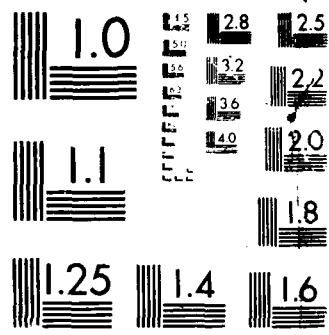
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A STUDY TO DESIGN A FUNCTIONAL
SPACE UTILIZATION PROGRAM
FOR IMPLEMENTATION AT THE UNITED STATES
ARMY MEDICAL DEPARTMENT ACTIVITY,
FORT BENNING, GEORGIA

A Problem Solving Project
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree
of
Master of Health Administration

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ELECTE
JUL 12 1988
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By

Captain Donald J. Bruss, MSC

April 1980

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I. INTRODUCTION

Most Favored Status: Military Versus Civilian

A survey of the current literature reveals a continuing emphasis on the trend toward the increased utilization of outpatient services. The reasons for this trend have been numerous. The astute observer could confirm the existence of such a trend by studying the construction and expansion projects of local hospitals. The growth of physicians office buildings collocated with a hospital, the growth of ambulatory surgery centers, government support of health maintenance organizations and other primarily outpatient related facilities and organizations, indicates the reality of the trend toward outpatient care.

Most hospitals have grown with the evolution of medical care and have built strategic planning models which include growth through the construction of additional facilities. A typical scenario would call for an older, primarily acute care facility acquiring an adjoining piece of real estate which would be initially developed into additional parking areas. After recouping the tax advantages of such an acquisition, construction of an administrative wing would commence followed by the acquisition of another adjacent piece of real estate for additional parking areas, followed by construction. Expansion would continue, evolving the facility in consonance with the health

care system.

The military health care manager is faced with a different type of problems. On the one hand, both the patients and the staff challenge the military health provider to keep pace with a rapidly evolving health delivery system while on the other hand, the budgeting process thwarts an aggressive, proactive expansion effort like that of their civilian counterparts. Contrast the two systems; the military is budgeted on an annual fixed dollar amount programmed to do the most good for the least amount for a given population, the addition of new services must be made at the expense of other services offered. The civilian is budgeted based on revenues, the addition of new services dependent upon the potential for generation of new revenues. Military posts, with few exceptions, have an abundance of real estate but little potential for development. The civilian must compete for the acquisition of real estate in an open market, but once acquired is relatively free to develop the real estate based on potential revenue generation. The military, because of its inability to expand through construction, is forced to wedge 1980's technology into structures designed in the 1950's (there are some exceptions to this concept, Walter Reed Army Medical Center, the most poignant). The civilian is free, based on fiscal success, to expand with the times.

The dissimilarities of the structure of the system extend into the internal management. A civilian institution whose life's blood rests

with occupied beds, can readily quantify the performance of the suppliers of demand, the physician, and establish a priority for the level of emphasis or favoritism to be given a given provider or a given service within the hospital. Take, for example, the hospital which has credentialed two surgeons, A and B. If A doubles the hospital revenues of B, then A, necessarily so, will receive more favored treatment than B. In the military, we have no similar method of production accountability. What method exists accounts for services provided by departments radically different. A comparison of revenue generation, dollar to dollar, from department to department, places workload on equal footing. Comparison of live births to appendectomies is hardly an equal comparison. "Favored" treatment, in the military, therefore, does not necessarily go to the individual who produces the most for the least, rather, it is more likely to go to the person who can boast of accomplishment which cannot be measured adequately. The theory of the "squeekiest wheel" can easily drive the military medical management system.

The military health care manager is faced with a dilemma. On the one hand, he must keep pace with the burgeoning demands of the health delivery system while on the other hand he cannot expand outside the walls of the present institution. In all respects, he must cater to the demands of the providers regardless of output. The discriminator of measuring production on an equal basis is lost to the military

manager.

Physical Facilities Utilization: Space, a Finite Resource

Because of the lack of expansion capability, the health care manager has found that physical space, not unlike time, is finite and must be carefully managed. Also, not unlike time, once expended space is nearly impossible to recoup. To prove this concept, one needs only to suggest that another member of a facility be obligated to part with a few square feet of space to allow for the expansion of yet another office or department. The territorial nature of the owners of terrain quickly emerges.

Proper allocation and management of space is viewed as twofold. First, short run, or tactical, for day-to-day operations and second, long run, or strategic, for overall system coordination.

Statement of the Problem

The problem is to study the tactical as well as the strategic planning process involved in the utilization of physical facilities at the Medical Department Activity, Fort Benning, Georgia, and to design an optimal feasible model for tactical and strategic space management.

Objectives

The primary objectives of this study will be to:

- a. Identify the present efforts in space utilization.
- b. Through a random sample questionnaire, solicit the opinions of

staff members addressing:

- (1) The frequency of office relocation within the MEDDAC.
 - (2) The level of satisfaction with the planning, execution and effects on efficiency of the relocations.
 - (3) Suggestions for improvement.
- c. Through a Delphi technique, solicit the opinions and formulate a methodology for tactical space utilization.
 - d. Develop, analyze and interpret available historical data.
 - e. Recommend the most appropriate method for space utilization both on a tactical as well as a strategic basis.

Assumptions

For continuity and for research viability, the following assumptions are made:

- a. Continued expansion of health services at Fort Benning will cause a critical shortage of available space.
- b. Effective management of space utilization is possible.
- c. Staff reaction to development and initiation of efforts to effectively control space utilization will be supportive, cooperative, and generally favorable.

Limitations and Obstacles to Optimum Research

The following limitations and obstacles to optimum research are

identified:

- a. The allocation and reallocation of physical space in the Fort Benning MEDDAC is an emotionally charged subject. Opinions solicited will reflect the personal prejudice of the respondent. The level to which these opinions can be, or should be, quantified and analyzed is limited by this fact.
- b. The focus of this study is on space utilization at this MEDDAC only. Although other health care delivery institutions will be cited, no attempt will be made to compare their program with the one at Fort Benning.
- c. Historical data, where available, is prejudice and suspect due to changes in accounting mechanisms, command support, and/or emphasis of programs and sources of data.
- d. Collection of reliable data reflecting the numbers of potential recipients of medical care (i.e., dependents, retirees and dependents of retirees) is limited. In order for the analysis of data to be based on a standardized accounting system, only the troop population at Fort Benning will be considered.

Required Standards and Criteria

The required standards and design of an acceptable space utilization model will include:

- a. In the staff questionnaire, the use primarily of a percentile frequency distribution and simple graphing techniques will suffice

in response analysis. Written comments and opinions solicited in the questionnaire must appear at least twice in order to be included in the final analysis.

b. At least 50 percent of the members of the Delphi group must respond in order for the iteration to be considered successful.

c. Historical data which will be utilized in regression analysis, must develop an $r^2 \geq .75$ in order for the relationship to be considered strong. In the event of $.50 > r^2 < .75$ the relationship will be considered on the merit of the data available. An $r^2 < .50$ must be carefully analyzed prior to consideration of relationship.

Research Methodology

The following research methods were utilized to gather data relative to this study:

a. Review and analysis of selected statistical records and reports particularly those documents which reflect annual inpatient bed days, outpatient visits and troops supported.

b. A review of the history of hospital care at Fort Benning from its birth in 1918 to the present day, concentrating primarily upon construction efforts.

c. Personal interviews with those members of the local MEDDAC who serve as institutional memories.

- d. Random staff questionnaires designed to solicit opinions of historical actions as well as input for future actions.
- e. Formulation of an interdisciplinary, functional Delphi group with varied longevity at this organization.
- f. Direct site analysis.
- g. Decision theory.

II. DISCUSSION

Space Utilization

Little has been written concerning the proper utilization of physical facilities in military health care facilities. Although such organizations as the Health Facilities Planning Agency do have standards and guidelines for square foot requirements, these standards pertain primarily to the planning of new construction rather than allocation of space within existing facilities. In speaking with a member of that agency about the problems of space utilization, his replay was "Once the paint has dried and we have hung the signs, the biggest dog on the block can move the signs wherever he sees fit." Perhaps an oversimplification, but a not altogether untrue observation.

As stated earlier, the military has yet to develop a production measurement system as efficient or effective as their civilian counterpart. Until such time that a military health care manager can turn to a standardized measurement of production and compare Department A with Department B, the control of precious resources must go to the department who is able to draw the most attention to their own parochial interests. Chances are that the department that has the time to draw such attention to itself hasn't the production rate of the quiet department. The quiet department is probably too busy producing results

to take part in political maneuverings.

Martin Army Community Hospital

The history of medical care at Fort Benning, Georgia, began in 1918, when the first soldiers arrived at the Bussey Plantation, south of Columbus, Georgia. Since that time, four hospitals have been built, the first a simple two-story "infirmary," the fourth, a nine-story concrete and brick structure (Appendix B).

The present location of Martin Army Community Hospital is unique. The nearest troop population is some three miles distant. The hospital itself is located on top of the highest point at Fort Benning, equally distant from the Main Post and the troop area of Kelley Hill, approximately three miles apart. Two other troop concentrations, Sand Hill and Harmony Church, are approximately five to eight miles away.

The original planners of Fort Benning envisioned a centrally located post community support area. When Martin Army Community Hospital was built it became the first element of this area. In the mid-1970's, the Post PX and Commissary Mall with an adjacent bowling alley and service station formed the second major element. At present, no troop concentrations are located near the hospital. The PX Mall is a mile distant. There are three, two-story BOQ buildings adjacent

to the main hospital but no other buildings are available for hospital use. The BOQ's, in the late 1970's, were returned to post control for use as BOQ's post-wide rather than for the exclusive use of the hospital.

In addition to the main hospital building, there are three converted ward buildings in the "old" hospital area. The "old" hospital area is made up of the stucco and brick facility built in the 1920's and 1930's (Annex B). Recently, the hospital reacquired Building 66, the former location of Dental Clinic No. 2, a building initially built as a dispensary, constructed of brick in the late 1920's.

Although built on a 500-bed chassis, Martin Army Community Hospital has slowly lost inpatient bed space over the years. The most dramatic loss occurred during the electrical/mechanical upgrade of 1975. Seventy-seven inpatient beds were lost to the required "towers" which house fire escapes. Martin Army Community Hospital currently is rated as having the capability to erect and operate 419 beds within three days by statistics gathered at the Health Facility Planning Agency of the Office of The Surgeon General internal reports indicate that 453 beds and bassinets are set up. The author suspects that the actual number is far short of either figure.

In the 63 years since hospital support has been provided to Fort Benning, there have been twenty-nine different hospital commanders (Figure 2-1). In the twenty-two years since Martin Army Community

Hospital was opened in 1958, there have been 12 different commanders.

Hospital Commanders
Fort Benning, Georgia
(1920 - Present)

LTC C. E. Koerper	1920-1923
MAJ Charles Conner	1923
COL J. W. Van Dusen	1923-1924
LTC H. S. Hansell	1924
LTC P. S. Halloran	1924-1927
MAJ D. P. Card	1927
COL D. F. Baker	1927-1928
COL Clarence J. Manly	1928-1931
COL Charles F. Morse	1931-1932
COL Lloyd L. Smith	1932-1938
BG William R. Dear	1938-1940
BG Edward A. Noyes	1940-1942
COL Chauncey E. Dovel	1942-1946
BG Robert B. Hill	1946-1950
COL Charles J. Mudgett	1950-1951
COL Mack M. Green	1951-1953
COL Norman H. Wiley	1953-1956
COL Albert H. Robinson	1956-1957
BG Robert B. Skinner	1957-1959
BG Bryon C. T. Fenton	1959-1961
COL William Todd, Jr.	1961-1964
LTG Hal G. Jennings	1964-1968
COL Martin A. Pfotenbauer	1968-1970
BG George S. Woodurd, Jr.	1973
BG John W. White	1973-1974
COL Anton L. Hitzelberger	1974-1979
COL Albert L. Gore	1979-1980
BG Frank F. Ledford, Jr.	1980
COL Joseph H. Baugh	1980-Present

FIGURE 2-1

Twelve commanders in 22 years appears to be an acceptable, if not ideal, turnover rate; however, closer examination reveals a sporadic

pattern of turnover. For the three year period, 1958 to 1961, two commanders served; for the seven-year period, 1961 to 1968, two commanders served; for the five-year period, 1968 to 1973, five commanders served; for the six-year period from 1974 to 1980, four commanders served. Recent history, 1974 to 1980, indicates that one commander served for five of the six years, the remaining two commanders splitting the remaining year nearly equally.

Identifying Existing Endeavors

Martin Army Community Hospital has entered the 1980's with a number of problems, some with solutions, some without. In an effort to keep pace with the health care delivery system, expansive efforts have been made over the years to expand the ambulatory care function, as seen by the clinic wing project, the electrical and mechanical upgrade project, as well as acquisition of state-of-the-art equipment. Consumer activism, physician shortages, misallocation of resources all have created a burgeoning bureaucratic organization. The major end result has been the increasing demand for rapidly disappearing floor space.

Formal systems have been developed for the management of physical facilities utilization. MEDDAC Regulation 15-1, Annex EE, establishes the Physical Facilities Utilization and Long Range Planning Committee

(Appendix C). As defined by MEDDAC Regulation 15-1, the purpose of the committee is to (1) identify physical facility resources and (2) recommend to the commander ways of using those resources efficiently and effectively, (3) to formulate intermediate (2-5 year) and long range (5+ years) goals and objectives of a broad nature, (4) to conduct and analyze demographic studies and (5) to develop trend projections.

MEDDAC Regulation 10-1, Organization and Functions, Paragraph 3-19b (14), places the function of systems analysis, space and layout survey and management systems design services for the command. (Appendix C)

Although both of these formal systems exist, a search of historical files as well as a query of the institutional memories, merited no knowledge of their use. Committee minutes were not discovered. Functional actions by the Comptroller, likewise, were nonexistent. The discovery of the lack of documentation did not indicate a stable managerial environment. To the contrary, the term Dynamic Homeostasis accurately describes the state of affairs at the Fort Benning Medical Department Activity.

Appendix D details the movements through the offices in Building 9200, Martin Army Community Hospital. Indicated in Appendix D are the

number of times each office has been occupied since the plans were executed in 1976. This record is far from complete and has been reconstructed from the institutional memories of the hospital. The relocations shown in the appendix are not the temporary relocations required by building projects, rather they are relocations required by another management requirement.

As an example of the frequency of office relocations, a few examples are cited:

Department of Personnel: Prior to 1975, located on the first floor, moved to the 9th floor in 1976, relocated again in 1977 to the basement, relocated again to the 9th floor in 1979, where they are presently located.

Allergy and Immunization Clinic: In the mid-1960's, located in the main hospital, relocated to Building 322 (Old Hospital Area), relocated to main hospital in the 1970's, relocated within the hospital to the Dermatology Clinic, first floor in 1978, with no notice relocated and split between a small office in the outpatient clinic and a treatment room in the emergency room in June 1980, relocated again in December 1980 to the ENT Clinic, presently threatened with relocation due to interference with that clinic.

Comptroller: From 1971 to 1975, this division occupied offices adjacent to the headquarters. In 1975, the office relocated to the basement conference room, returned to the first floor, then moved to the basement in January 1980, where they are now located.

Plans, Operations and Training: Since 1976, this department was located in the basement. In October 1980, the offices was moved to the 9th floor where it was abruptly returned to the basement conference room after only one day. From the basement conference room, it moved in December 1980 to its present location in the basement.

Not a complete list, nor a unique list, some of the moves were the result of acquisition of new equipment, as in the case of Allergy and Immunization Clinic and Plans, Operations and Training, some of the moves resulted for no apparent reason. In each case cited, as well as the numerous others investigated, there exists no audit trail, no written decision and no master plan. The Comptroller orchestrated none of the moves investigated. The Physical Facilities Utilization and Long Range Planning Committee (PFU/LRPC), records no knowledge of the moves.

There appears to have been a centralization of authority for planning and executing relocations. The response of the command

structure appears to have been myopic and schizophrenic. In planning a major purchasing program, little attention was paid to the consequence of location. Once equipment arrived seemingly snap decisions were made in preparing space for installation. The displacement of sections of or entire functions of departments was accomplished. Members of the section being displaced sometimes discovering they were to be moved only when the work crew began removing furniture. What audit trails that exist are included in Appendix D.

A quasi-system of movement evolved, it appears, as a result of the necessity to displace wards and clinics during the electrical/mechanical upgrade. The Clinical Support Division (CSD) was given ad hoc responsibility in coordinating movements required by the upgrade. This system appears to have become an institutionalized process with CSD now wielding the power of movement over the entire hospital. It is not uncommon for Clinical Support Division to cross into the function of an entirely different division and attempt to uproot all or part of that division to make room for whatever CSD sees as appropriate. As an example, see Appendix D. Probably the most blatant example of this is in the movement of the Comptroller, Personnel and Red Cross, none of which have anything to do with the Clinical Support Division's functional areas of responsibility.

Some of the decisions shown in Appendix D were approved by the Executive Officer, some are questionable, some are blatant encroachments upon the autonomy of other departments. Few, if any, leave an

audit trail. Most moves have been made on a crisis management basis.

Martin Army Community Hospital is now faced with a major crisis. Clinic and administrative areas have slowly crept into "tower" areas once reserved for inpatient bed space. The second floor now houses a gastroenterology clinic and a respiratory inhalation clinic. Additionally, the second floor houses an EKG as well as a cardiac clinic area. An entire wing of the fourth floor houses administrative functions including the Department of Nursing and the Inpatient and Ancillary Services of Clinical Support Division. The ninth floor houses the Podiatry Clinic and Personnel Division. Scattered throughout the tower, are the offices of the Red Cross, Clinical Support Division, Organizational Effectiveness Staff Officer, Reenlistment, Equal Opportunity as well as a number of other strictly administrative functions.

Long Range Planning

Space utilization must be tied directly to Long Range Planning. A search of records and historical documents revealed that no such written document exists. The search additionally revealed that no such conceptual or verbal plan exists. It appears as though the hospital is swept along like a cord on the high seas. Appendix E is as close to a long range planning document as is available. This document was drawn up by a departed Executive Officer and three of the major staff officers. The document did not evolve past the stage it appears in Appendix E.

Committee Dynamics

After discussing the perceived problem with the hospital Executive Officer, a decision was reached to attempt to resolve the problem of space utilization through the use of the Physical Facilities Utilization and Long Range Planning Committee (PFU/LRPC). The first meeting met on 15 October 1980. As shown by the minutes of the meeting, included in Appendix F, the purpose of the meeting was that of problem identification with the goal being that of developing a plan for physical plant utilization. During the meeting, a list of identified problem areas was developed, reproduced and dispatched to the members of the committee (Figure 2-2). Each member of the committee was asked to prioritize the identified areas, adding those areas which had been overlooked, and returning the list to the headquarters by a given date.

Once the results of the prioritization were received, a simple averaging technique was performed to determine consolidated priorities (Figure 2-3). The priority list was then reconstructed and provided the members of the committee (Figure 2-4) at the next meeting on 22 October 1980.

At the second meeting, the priority list was distributed and reviewed. Some additions were made, but not prioritized (Figure 2-4). Through the recommendation of the committee a Task Force was appointed, consisting of the Chief of Professional Services; Chief, Department of

SPACE UTILIZATION
IDENTIFIED PROBLEM AREAS
(Not in Priority)

<u>IMMEDIATE</u>	<u>12 MONTHS</u>	<u>36 MONTHS</u>	<u>60 MONTHS</u>
1. Allergy/Immunization Clinic	1. Receipt of Radiology Equipment, including computer terminal/Dermatology Clinic	1. Rear of kitchen, food service	1. State-of-the-art equipment support
2. OR Storage on A2	2. Staff sleeping rooms and lounge area	2. Logistics, SAILS conversion	2. Video studio
3. Plans, Operations and Training	3. Well Baby Clinic	3. EMT-ER sleeping area	3. Further shift to "ambulatory" model
4. Podiatry Clinic	4. Paper storage for computer	4. Radiology file space area	
5. ARD Season	5. Automation Management offices	5. EKG file space area	
6. Red Cross	6. Radiology	6. OT/PT requirements	
	7. Personnel on 9th Floor	7. GI Clinic, A-2, permanent facility	
	8. Central Automated appointments	8. Front lobby refurbishment	
	9. Building 66 (Dental Clinic #2)	9. A&D refurbishment	
		10. Barracks, space and location	
		11. Word processing	

FIGURE 2-2

IDENTIFIED PROBLEM AREAS

<u>IMMEDIATE</u>	<u>\bar{X}</u>	<u>PRI</u>	<u>12 MONTHS</u>	<u>\bar{X}</u>	<u>PRI</u>	<u>36 MONTHS</u>	<u>\bar{X}</u>	<u>PRI</u>	<u>60 MONTHS</u>	<u>\bar{X}</u>	<u>PRI</u>
1. Allergy/Immuniza- tion Clinic	2.21	1	1. Radiology Equipment/ Dermatology Clinic	2.3	1	1. Kitchen, Food Service	3.4	4	1. State-of- art equipment support	1	12
2. OR Storage on A2	4.48	5	2. Sleeping rooms	4.6	6	2. SAILS Conversion	3.1	3	2. Video studio	2	18
3. Plans, Opera- tions & Training	3.71	4	3. Well Baby Clinic	3.9	4	3. EMT sleeping area	1.5	1	3. Further shift to "ambulatory" model	1	12
4. Podiatry Clinic	3.0	3	4. Paper Storage	6.8	9	4. Radiology file space	5.1	7			
5. ARD Season	2.4	2	5. Automa- tion Mgt offices	6.3	8	5. EKG file space	5.9	8			
6. Red Cross	5.10	6	6. Radio- logy	3.3	3	6. OT/PT	2.5	2			
			7. Personnel	6.1	7	7. GI Clinic	4.6	6			21
			8. Central appointments	4.1	5	8. Lobby refurb- ishment	6.8	11			
			9. Bldg 66	2.6	2	9. A&D Refurbish- ment	6.5	10			
						10. Barracks, space and location	3.9	5			
						11. Word processing	6.3	9			

FIGURE 2-3

IDENTIFIED PROBLEM AREAS FOR SPACE UTILIZATION

(By Priority)

IMMEDIATE

1. Allergy/Immunization Clinic
2. ARD Season
3. Podiatry Clinic
4. CMS Storage - A2
5. Red Cross

ADDED: (No Priority)

1. EMT sleeping/recreation room
2. Renovation of PES
3. Logistics/SAILS Conversion
4. Word Processing

12 MONTHS

1. Radiology Equipment/Impact on Dermatology
2. Building 66 (DC #2)
3. Radiology
4. Well Baby Clinic
5. Central Automated Appointments/OT
6. Staff Sleeping Rooms and Lounge Areas
7. Personnel on 9th Floor
8. Automation Management Officer
9. Paper Storage for Computer

ADDED: (No Priority)

1. Plans, Operations and Training Division
2. Expand B-4 in patient capability

36 MONTHS

1. OT/PT Requirements
2. Barracks Space and Location
3. GI Clinic, A-2, Permanent Facility
4. EKG File Space Area
5. Radiology File Space Area
6. A&D Refurbishment
7. Front Lobby Refurbishment

ADDED: (No Priority)

1. Rear of kitchen, Food Service Division
2. L&D and Newborn Nursery
3. Medical Clinic Expansion

60 MONTHS

1. State-of-the-art equipment support
2. Further Shift to Ambulatory Care Model
3. Video Studio

FIGURE 2-4

Nursing; Chief of Administrative Services (Executive Officer), and the Chief of Logistics.

The Task Force met three times to discuss the problems cited in the prioritization listing. The report to the committee is included in Appendix F. This Task Force was able to reduce the number of immediate problems and to eliminate a number of other problem areas. The report was received by the body of the standing committee on 19 November 1980 (Appendix F). The report was accepted and approved by unanimous vote of the standing membership.

Although scheduled to meet again on 10 December 1980, the meeting was cancelled and never rescheduled. As of March 1981, this committee has not met, nor has it been scheduled to meet. The prioritization and recommendations of the Task Force have fallen into a void of disuse. The system of space allocation has once again passed back to where it existed prior to the committee action.

The committee performed one major role, it halted temporarily the movement of sections within the hospital. This movement, however, has resumed, with much the same modus operandi of the previous era. Clinical Support Division again is orchestrating the movement, with little or no Comptroller interest and no committee involvement. The Emergency Medical Technician's (EMT's) sleeping areas are being resolved by a movement out of house. Building 66 has been redesignated the home of the Preventive Medicine Activity, and other movements,

internally, have been executed amongst minor offices.

III. TACTICAL PLANNING

The Sociopsychological Effects of Reallocation of Physical Facilities

One could intuitively reason that the relocation of work sites within the physical facility would cause enough disruption to daily routine to affect not only the individual employees' performance but also the efficiency of the entire work section. These effects, it could be reasoned, would have both an immediate effect as well as long term effect on the sections as well as the organization as a whole.

Although logical and reasonable, little has been published documenting this phenomena. Two authors, Janice Wyatt and Thomas Galski in their summer 1977 article, "The Psychological Impact of Hospital Expansion" in Health Care Management Review, advocate a more humanistic approach to planning. These authors feel that it is critical to confront the issue of human adaptation to changes in environment early in the planning stages because the reactions of employees may affect the overall treatment of patients, efficiency in the performance of duties and the general provision of health services to the community. These two authors go on to document the impact on the individual employees of a hospital which had undergone an expansion which doubled its size as well as incorporated smaller, semi-independent units into the larger organizational structure. Being social scientists, they dwell primarily upon the sociopsychological ramifications of hospital expansion,

suggesting various methods of reducing the stress and trauma associated with expansion. Although based primarily on personal interviews and counselling sessions, the research utilizes no quantitative methodologies for verification of or continuation of their research.

Utilizing the theory espoused by Wyatt and Galski that there are negative sociopsychological ramifications in hospital expansion which affects overall treatment of patients, efficiency in the performance of duties and the general provision of health services to the community, a questionnaire was developed to attempt to quantitatively define, describe and measure the theory.

The Staff Questionnaire

The utilization of a questionnaire to study the effects of a program such as Physical Facilities Utilization attempts to measure not the outputs of planning, but the resultant outcomes (Figure 3-1).

As with any similar questionnaire which attempts to make "objective" a "subjective" analysis, the pitfalls are numerous. The attitude of the respondent, the position within the organization, the knowledge of the subject matter, the time of year and a myriad of other definable and nondefinable factors enter into the validity of the collected data. The questionnaire developed for this study was designed as a vehicle to measure the results of the present efforts in the allocation of

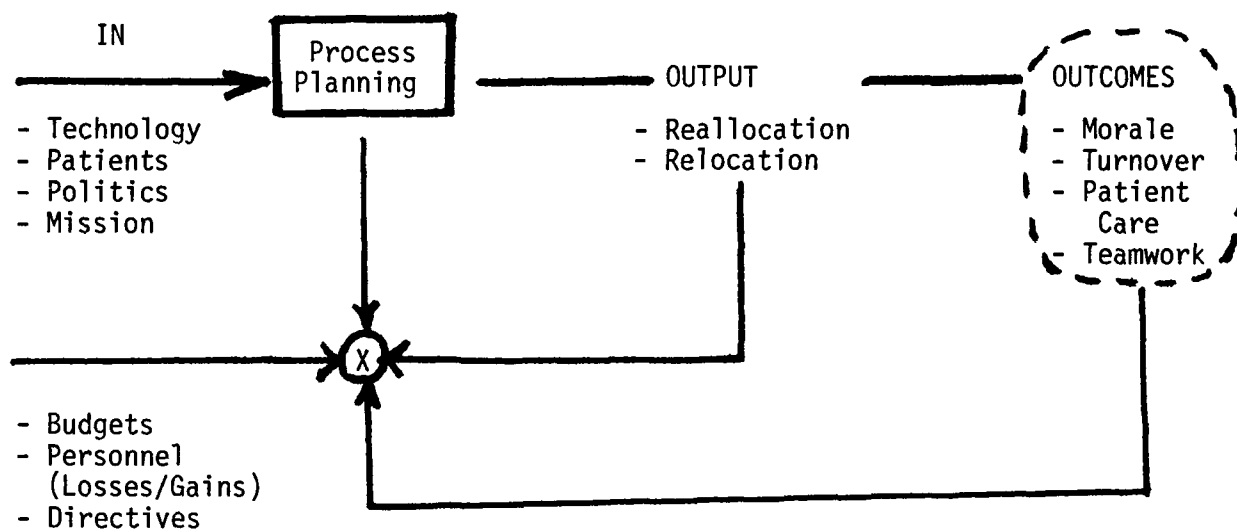
THE SYSTEMS MODEL OF SPACE ALLOCATION

FIGURE 3-1

space within the physical facilities. The questionnaire was designed to be descriptive rather than to provide a predictive tool.

The questionnaire underwent revision after two field tests within the hospital. Modification to the prototype included clarification of instructions, the elimination of two ambiguous questions and the restructuring of three other questions. The resultant questionnaire is provided in Appendix H. The questionnaire includes both forced choice, judgmental-desirability, questions as well as questions which elicit personal opinions on an open-ended basis.

The sample size for the staff questionnaire was determined by the use of inferential manipulation. The base line data for population identification was the staffing levels by general categories for the Fort Benning MEDDAC as of 31 December 1980 (Appendix G). The population standard deviation (σ) was estimated ($\sigma = 2\%$), with the percentage of major personnel category utilized to serve as the polar values of the range. Utilizing the Central Limit Theorem, with a confidence coefficient of .95 (reliability coefficient = 1.96), a maximum allowable error of $d = 2$, the sample size (n) was calculated at 36 (Appendix G).

Ninety questionnaires were prepared for the study. In order to insure the widest dispersion as well as a random distribution, the

90 surveys were taken to central distribution with instructions to dispatch them utilizing Distribution A. An arbitrary time limit of two weeks was established for the completion and return of the questionnaire. All questionnaires received after that time would not be included in the data analysis phase, providing the $N = 36$ was satisfied. Thirty-eight questionnaires were returned within the time limit. The results of the staff questionnaire are delineated in Appendix J.

Data Analysis - Staff Questionnaire

The staff questionnaire was randomly distributed throughout the Medical Department Activity via the central distribution system. Of the 90 distributed, 38 were returned by the arbitrary two-week time limit. Analysis of the responses indicated two ambiguous areas which were not detected in the field testing phase. The first, question 14, was answered with a number of question marks (?) as well as other nondefinable marks and remarks. This question was eliminated from the data analysis. The second major shortcoming was the demographic data collection. Of 38 respondent, 10 did not elect to complete the demographic data. Reports to the author, both verbal and written, indicated that the demographic responses which were requested allowed easy identification of the respondent. Within the demographic data, the responses to question 20, work site, were

infrequent enough to eliminate this question in the data analysis. Of the 38 responses to demographic questions, 28 had sufficient data to provide a demographic cross section of the respondents.

Of the respondents who elected to provide demographic data, 50 percent were officers, 14.3 percent were enlisted and the remaining 35.7 percent were civilian employees. All of the civilians were GS level employees. The mean length of service for these personnel was 4.3 years, the median length of service was 3.5 years. There were two modes, 2.5 and 4.5 years.

The survey revealed that 26.3 percent of the respondents had not been involved in any relocation actions. Seventy-three point seven percent had been relocated at least one time. Of 73.7 percent, 21.1 percent had been moved four or more times during their employment, 23.7 percent had been moved once and an equal 23.7 percent moved twice.

In describing the latest move in which the respondents took part (which is the basis for the responses to questions 2 through 12), 61 percent had been consulted prior to the move being directed.

Advance notice of relocation was provided in 46.4 percent of the cases. The average length of notification was 9.3 days. Of the relocations, 27.8 percent were required to make room for other departments followed by 25 percent for construction projects and 22.2 percent

for other reasons. In some cases, there was a dual purpose in the relocation thus resulting in 36 responses to this question as opposed to the 28 anticipated responses.

The respondents reported a noticeable drop in job performance following the relocation of their work site. The lowest point in job performance occurred during the first week, rapidly climbing back to a level slightly below the performance level demonstrated prior to the move. Because this is an analysis of personal performance, it would be expected to be somewhat biased toward a higher self appraisal. The respondents were not as kind when addressing the efficiency of their respective sections. The average time to return to full pre-move efficiency was nearly two weeks. It was reported by the remaining 50 percent that it took longer than two weeks to return to a pre-move efficiency level. A full 35.7 percent reported that it took a month or longer to return to a pre-move efficiency level.

Of those relocated, 50 percent felt strongly that the move did not improve efficiency in their section, 10.7 percent felt that efficiency had not improved. Only 32.2 percent felt that the move had improved the efficiency of their section.

The move was felt to be poorly planned by 53.5 percent of the respondents, while only 28.6 percent felt that the move was well planned. In the narrative portion of the survey, questions 15 and

16, this perception is amplified. When asked if they felt the relocation was necessary, the respondents were nearly evenly split with 42.9 percent indicating a necessity for relocation and 39.3 percent indicating no necessity.

Individual opinions were elicited for a method to more properly plan and execute relocation. Figure 3-2 is a summation of those comments.

When asked to respond to how space should be allocated within the hospital, the replies followed a similar pattern as shown in Figure 3-3.

The Delphi Technique

In designing a model for proper management and utilization of physical facilities, the willing participation of a delicate coalition of professionals from different backgrounds and interests is mandatory. Often the imposition of a requirement for participation results in conflict, dominance by a few members of the group, parochialism and factionalism. To avoid such a situation and to develop a forum where there is an ease of expression of honest opinions, a Delphi technique was developed and utilized for this study.

As introduced to the thirteen members of the Delphi during the first iteration (Appendix I), the Delphi technique is a survey process in which its participants are a panel of experts with both extensive

STAFF OPINIONS IN PROPER PLANNING

- Stop crisis management.
- Do feasibility studies first.
- Include affected areas in planning.
- Phase sections in and out, completing required upgrades between moves.
- Offer more than one alternative.
- Let the staff who are paid to think, plan the move; leave clerks out.
- Give advanced warning.
- Allow input into planning before decisions are made.
- Co-locate an administrative wing with the hospital via new construction.
- Start long range planning.
- Return the function of space management to the Management Branch of the Comptroller Division.
- Less preference to seniority and more to performance.
- Employ a Facilities Coordinator.
- Look a litte further into the future than next week.
- We need more workers and less thinkers.
- Every time the hospital gets a new Administrative Resident, sections start moving.

FIGURE 3-2

STAFF OPINIONS IN PROPER ALLOCATION OF PHYSICAL SPACE

- Present the study to the Executive Committee.
- Allocate space, direct patient care areas first.
- Identify the needs of the individual job requirements.
- Identify traffic flow.
- Keep office space in patient areas to a minimum.
- Allocate space by workload, number of providers, and storage space requirements.
- Involve the space utilization committee.
- Patient care has first priority.
- Administrative and staff areas on first floor.
- Keep clinic areas on first floor.

FIGURE 3-3

theoretical knowledge and commensurate experience in the field being researched. The process is characterized by multiple iterations of a similar question(s) which solicits the participants esteemed opinions. Panel members may freely revise their position at each iteration, based on the evaluation of a summary of all participant's opinions provided at the start of each iteration. Panel members will remain anonymous, as one of the prime reasons for this approach is to encourage the likelihood of frank responses.

Thirteen members of the Delphi were chosen based on their rank, position in the organization, background and experience. These members are shown in Figure 3-4.

During the first iteration, eight of thirteen members responded. The general consensus was that space utilization was a symptom of a larger problem rather than a problem in itself, that problem being one of a lack of long range planning. Several members of the Delphi stated a need for a written, long range plan. The members were nearly unanimous in the opinion that the best management of space was through a multi-disciplinary committee. Several of the members pointed to the newly re-established Physical Facilities Utilization and Long Range Planning Committee (PFU/LRPC) as a positive step.

One of the suggestions voiced by a few of the Delphi participants was to formulate the PFU/LRPC similar to the Program Budget Advisory

MEMBERS OF THE DELPHI GROUP

<u>DEPARTMENT</u>	<u>RANK</u>
Chief of Professional Services	Colonel
Chief, Department of Nursing	Colonel
Chief, Comptroller Division	Lieutenant Colonel
Chief, Logistics Division	Lieutenant Colonel
Chief, Patient Administration Division	Major
Chief, Clinical Support Division	Major
Chief, Department of Primary Care and Community Medicine	Colonel
Command Sergeant Major	E-9
Chief, Pharmacy Service	Major
Chief, Medical Supply	Captain
Chief, Ambulatory Care Support Branch	Captain
Assistant Chief, Department of Nursing	Lieutenant Colonel
Organizational Effectiveness Staff Officer	Captain

FIGURE 3-4

Committee (PBAC). A synthesis of the recommendations for management of space through the use of a committee included the following steps to be followed:

1. Analyze the space needs of this hospital from a zero-based system, similar to zero-based budgeting.
2. Prioritize the identified needs of the hospital based on:
 - a. Present mission.
 - b. "Absolute" space requirements.
 - c. Available resources (personnel and material).
 - d. Patient requirements and demands.
 - e. State-of-the-art requirements, present and future.
 - f. Possible future missions (ARD season, mobilization).
3. Develop and analyze alternatives.
4. Select the best alternative(s).
5. Recommendations to the Commander.

The second iteration of the Delphi was dispatched after a synthesis of the opinions of the first iteration (Annex I). Ten of the thirteen members replied, most were synonymous in their opinions. Annex K contains the final recommendations of the Delphi group. Summarized, the Delphi group felt that a mechanism for space utilization existed presently. This mechanism was the PFU/LRPC, however, the PFU/LRPC must take a more aggressive role in developing a system for operational control and the development of a long range plan. The group was nearly

unanimous in that the Executive Officer should chair the committee.

In the development of a Long Range Plan, specific criteria was suggested for inclusion, shown in Annex K. Although not suggested in the specific format, a mechanism for the request for reallocation of space was developed by the author from the recommendations of the Delphi group (Annex K).

Likewise, a format for the establishment of a mechanism for properly requesting a change to the allocation of space was developed, incorporating the many ideas generated by the survey, the Delphi and personal interviews. This mechanism will be covered in the conclusions and recommendations section of this paper.

IV. CONCLUSIONS AND RECOMMENDATIONS FOR THE DAILY MANAGEMENT OF THE UTILIZATION OF PHYSICAL SPACE

Conclusions

After a review and an analysis of the staff questionnaires, the Delphi responses and personal interviews, it becomes readily apparent that there is a general dissatisfaction with the mechanisms presently established for the management and allocation of space. Although dissatisfied, there also coexists an opinion that the proper managerial tools are available to rectify this problem.

A number of factors are preventing the proper management of physical space. Each one of these factors can be controlled without a restructuring of the present organization. Proper utilization of the resources currently available will adequately resolve the problems shown below:

1. The organization lacks a clearly defined mechanism for the management of physical space utilization. This includes any mechanism for proper procedures in requesting additional space.
2. The daily management of physical space utilization has been forfeited by the Comptroller and has passed by default to the Clinical Support Division.
3. There is little or no audit trail documenting past actions in the realignment of space. Where an audit trail does exist, the decision processes involved are either improperly documented or are

not available. Routine coordination and the staffing of studies is nearly nonexistent. Input by affected departments is inadequate or altogether missing.

4. The Physical Facilities Utilization and Long Range Planning Committee cannot provide the daily management of physical space; rather it must be coordinated and integrated into the body of the organizational structure.

5. There exists no long range plan. Short range and intermediate range plans are also nonexistent.

Recommendations for the Daily Management
of Physical Space Utilization

Based on the findings presented within this study, it is recommended that the following actions be taken by the Commander, Fort Benning Medical Department Activity:

1. Adopt a mechanism similar to the one shown in Appendix O for the utilization of physical space.
2. Task the appropriate agencies in accordance with the mechanism shown in Appendix O, with performing the proper staffing procedures prior to the initiation of reallocation of physical space.
3. Task the Physical Facilities Utilization and Long Range Planning Committee with the development of a written planning document in accordance with MEDDAC Regulation 15-1, shown in Appendix C.

V.. STRATEGIC PLANNING: MOBILIZATION AND POST MOBILIZATION

Inpatient Bed Days - 1937-1980

Historically, past efforts in developing a planning model for mobilization expansion have been focused on the necessity for rapid expansion of inpatient bed space. Although the necessity for such space is indeed a driving force, an accumulation of forty-four years of data, coupled with historical precedent, indicates that another imperative, outpatient care, deserves equal emphasis.

As shown in Appendix B, dramatic and rapid expansion of the various hospital structures at Fort Benning resulted primarily from an involvement in a military conflict. Inpatient bed days data from 1937 to 1980 (less 1944) was collected from a variety of sources and graphically displayed in Figure M-1. As would be expected, inpatient bed days during hostilities climbed considerably from the prewar era. Inpatient bed days peaked and then fell off rapidly as hostilities ended, reaching a plateau near that of the prewar level.

As would be speculated from inspection, fitting a linear trend line to this data would prove to be unreliable due to the dramatic peak periods of wartime requirements. Utilizing the data available from 1937-1980 in fitting a trend line A, Figure M-1, an $R^2 = .181$ was derived, confirming the speculations made in the earlier inspection.

Further inspection of Figure M-1 reveals that following hostilities, inpatient bed days returned to a plateau on a level similar to that

42
INPATIENT BED DAYS ANALYSIS

	<u>A</u>	<u>B</u>
<u>VALUES</u>	<u>ALL DATA</u>	<u>NON-WAR DATA</u>
r	- .425	- .317
r ²	.181	.100
Slope	- 4584	- 1314
Intercept	9164410	296806
Mean	185314	121394
SD	137917	55851
1937	285414	150620

$$Y = a + bx$$

Where, x = Year i.e.: $Y = a + b (1980)$

FIGURE 4-1

of the prewar period. By omitting the peak war period of 1940-45, 1951-1952 and 1963-1972, a trend line, B, Figure M-1 reveals an $r^2 = .10$ and a slope of - 1314.5, a weak, negative relationship.

As a planning model, use of all available inpatient data (1937-1980) in a trend line analysis is futile due to the excessive peak periods caused by periods of hostilities. Peak periods must be managed and predicted on a case by case basis, dependent upon the relative size of the anticipated conflict. On the other hand, selective utilization of the available data of non-war periods, may well prove to be practical. The gradual downward sloping line developed from the non-war data indicates that a fairly broad planning model envisioning an average of 121,394 with a SD = 55,851 inpatient bed days is historically sound for similar non-war periods. Admitted, a planning model with an SD of this size is marginal for tactical planning. Annual tactical planning must necessarily be based on the data available from the most current previous years. On the other hand, just such a gross figure as provided by this trend analysis allows the strategic planner both a direction as well as a general indication of size of anticipated workload in non-war periods.

Outpatient Visits - 1937-1980

Outpatient data was collected from a variety of sources for the period 1937-1980 (Less 1944). A graphical representation of the data is displayed in Figure M-2. By inspection of Figure M-2 it is seen, as expected, that outpatient visits peak during periods of mobilization, drop off once hostilities end, then reach a leveling plateau. Unlike the inpatient bed days of Figure M-1, outpatient visits tend to seek a level considerably higher than that of the previous post-war era. This trend is best displayed in Figure M-3. In Figure M-3, the war years have been totally omitted highlighting this increase in outpatient visits. Figure 4-3 displays the results of a regression analysis on the three periods in history where a plateau occurred. The first 1937-1950 omits the World War II period and utilizes only the "compressed" data of the era. As can be seen from the r^2 values and the slope values, the plateau initially is positive but in more recent years, becomes nearly horizontal.

In an analysis of this data, it is shown that from 1950 to 1953, the hospital at Fort Benning experienced an increase of just over 200,000 visits per year. Similarly, from the period of 1962 to 1973, excluding the Vietnam conflict, a similar increase of just over 200,000 outpatient visits per year was experienced. At the end of the World War II period, however, this phenomena did not occur.

Utilizing a technique borrowed from economics, that of "deflating" money through the use of a price index, the outpatient visits of the post-1950 era are "deflated," or returned to base year 1950. Utilizing elementary logic, it is deduced that the mean of the nearly horizontal periods less base year 1950 will provide a correction factor for the two peak years, as shown in Figure 4-2.

Line B in Figure M-3 graphically displays the data utilizing the correction factor. Column 4 of Figure 4-3 shows that regression analysis of line B. As can be seen from the $r^2 = .007$ and the slope = 180, the line appears nearly horizontal.

Utilization of such a correction factor in a strategic planning model assumes two major concepts (1) outpatient visits are going to continue to rise and (2) the rise is predictable and predicated on the presence of hostilities requiring mobilization. Perhaps these assumptions are invalid, however, statistical analysis of over 40 years of historical data would indicate otherwise. The major question posed by this model is one of the validity of the theory that outpatient visits will increase by 200,000 over the period just prior to the advent of hostilities.

Figure M-4 once again displays outpatient visits with the periods 1942-45, 1951-52, 1962-72 shown by a broken line.

For the faint of heart or skeptical reader unwilling to accept

CORRECTION FACTOR

$$CF_1 = X_1 - OPV_{1950}$$

$$= 330,846 - 146649 = 184197$$

$$CF_2 = X_2 - OPV_{1950}$$

$$= 630110 - 146649 = 483461$$

FIGURE 4-2

OUTPATIENT DATA

(LESS 1942-45, 1951-52, 1962-72)

	<u>1</u> <u>1937-50</u>	<u>2</u> <u>1953-61</u>	<u>3</u> <u>1973-80</u>	<u>4</u> <u>CF DATA</u>
r =	.955	.604	.21	.081
r ² =	.913	.365	.04	.007
Intercept	20127	302530	620467	135315
Slope	12242	5663	2143	180
X	87461	330846	630110	147094
CF	0	184197	483461	

FIGURE 4-3

the theory that following the next war there will probably be an increase of 200,000 outpatient visits annually over the prior non-war era, a second theory is proposed based on a trend line analysis performed on all available outpatient data 1937-1980. Column A of Figure 4-4 shows the results of that analysis. Line A on both figures M-1 and M-4 corresponds to this analysis. This data predicts an excess of 18,000 annual increase in outpatient visits.

Eliminating the peak war years and concentrating on the plateau periods of 1937-1980, an annual increase of just under 16,000 outpatient visits is predicted, as shown in Figure 4-4, Column B. Line B in Figure M-4 corresponds to this analysis. The $r^2 = .962$ is surprisingly high.

In order for a predictive model to be in fact predictive, it must predict events with reasonable accuracy. If this model, line B, is a predictive model then it would be assumed that the elimination of data at some point in the past should result in a similar trend line. With this assumption, the data was eliminated from 1962 onward, resulting in only a partial model (1937-1962). Column C, Figure 4-4 shows the result of that analysis. With an $r^2 = .891$, the slope equals 16038, only slightly higher than when all the smoothed data was utilized. Line C, Figure 4-4, depicts this analysis. The two lines fall nearly on top of one another.

TREND LINE ANALYSIS
Outpatient Visits

	<u>A</u>	<u>B</u>	<u>C</u>	
<u>VALUES</u>	<u>ALL DATA</u> <u>1937-1980</u>	¹ <u>SMOOTHED DATA</u> <u>1937-1980</u>	² <u>SMOOTHED DATA</u> <u>1937-1962</u>	
r	.882	.981	.944	
r ²	.777	.962	.891	
Slope	18156	15886	16038	
Intercept	26149	489	2645	
X	422630	354276	231682	
SD	263536	218814	134272	
<u>YEAR</u>	<u>PREDICTION</u>	<u>(% DEVIATION FROM ACTUAL)</u>		<u>ACTUAL</u>
1973	572413	(-5.7%)	574710 (-5.4%)	607254
1975	604187	()	606785 (+0.9%)	601581
1980	683620	(+6.2%)	689973 (+7.2%)	643543
1990	988417	842488	847349	
	1,169,977	1,001,356	1,007,726	

1. Less peak war periods 1942-1945, 1951-52, 1962-67.

2. Less peak war periods 1942-45, 1951-52.

FIGURE 4-4

The Trend Toward Outpatient Care

As shown graphically in Figures M-1 through M-4, there appears to be two noticeable trends. The first of the trends indicates a decreased reliance on inpatient bed days following hostilities, the second, an increase in outpatient services. Since the roles of both the outpatient services and the inpatient bed requirements are so intertwined these two variables were compared to each other. Two methods of comparison were utilized. The first, a regression analysis where the variables

x = Inpatient bed days

y = Outpatient visits

The results of the analysis were inconclusive, as shown in Figure 4-5 below:

REGRESSION ANALYSIS -- OUTPATIENT VISITS VERSUS INPATIENT
BED DAYS

$$r = - .186$$

$$r^2 = .035$$

$$\text{Slope} = - .352$$

$$\text{Intercept} = 485,558$$

$$x = 181486$$

$$y = 421665$$

$$SD_x = 139918$$

$$SD_y = 265020$$

FIGURE 4-5

Another method of comparison utilized a simple ratio analysis over a period of time. The ratio value was derived from the formula $\text{Ratio} = \frac{\text{Outpatient Visits}}{\text{Inpatient Bed Days}}$. This value is shown graphically in Figure M-5. A linear trend analysis does not adequately describe the data, rather a curvilinear relationship would better fit the relationship, as shown by line A. As can be seen by inspection, there appears to be a very distinct trend toward outpatient care, a trend that has been shown earlier to be increasing at a rate of 16,000 outpatient visits per year.

Analysis of Troop Population, Inpatient Bed
Days and Outpatient Visits

One would suspect that the rate of inpatient bed days and outpatient visits would somehow be related to the supported eligible population. In an analysis of inpatient bed days and troop strengths from 1937-1980 an $r^2 = .608$ with a slope of 6.86 resulted between troop population and inpatient bed days. There appears to be a weak positive relationship.

Outpatient visits, on the other hand, resulted in an $r^2 = .069$, a relationship much weaker than that of inpatient bed days. Figure 4-6 consolidates the regression analysis of inpatient bed days

and outpatient visits with troop population. As explained in the limitations to optimal research section, troop population supported is the only reliable data with continuity from 1937 to the present.

RELATIONSHIPS OF INPATIENT BED DAYS AND
OUTPATIENT VISITS TO TROOP POPULATION SUPPORTED

<u>VALUES</u>	<u>INPATIENT BED DAYS</u>	<u>OUTPATIENT VISITS</u>
r	.780	.263
r^2	.608	.069
Slope	6.86	4.40
x	185,547	417,092
J_x	138,102	264,947

FIGURE 4-6

VI. CONCLUSIONS AND RECOMMENDATIONS FOR STRATEGIC PLANNING

After examination of available data and historical documents, the weight of evidence indicates that certain patterns and trends exist at Fort Benning, Georgia. These patterns and trends should directly affect the decision processes of the strategic planner. If heeded, the decisions made today will greatly reduce the problems faced in the future. The primary patterns and trends include:

1. Historically, new construction and/or expansion of the physical structures occurred or were approved as a direct result of and armed conflict involving the military forces of the United States. Resources, men, money and materiel, were poured into Fort Benning during periods of mobilization.
2. Immediately following the end of the hostilities, Fort Benning suffers a dramatic cutback in available resources and has been historically tasked with the continued maintenance and upkeep of physical property which has been poorly planned and/or poorly constructed, designed to meet the needs of the era in which it was built and not the era in which it was to be later used. The one exception to this conclusion is the brick and stucco facility of the 1925 era. Although now aged and obsolete, the construction of this facility has received the highest of praise throughout the history of Fort Benning.
3. As early as 1958, the year it was opened, Building 9200, Martin

Army Community Hospital, was identified as lacking the necessary physical space to properly support inpatient and outpatient care. (Appendix B). This overcrowding led to the clinic wing addition of the 1970's, but this additional area has already been outgrown as witnessed by the expansion of clinics into the tower areas designed for inpatient care.

4. Contrary to popular myth, dependent outpatient and inpatient care continues and grows during periods of mobilization (Appendix B).

5. Historical data (Appendix L) indicates an ever increasing requirement for outpatient services. Inpatient services, during periods of peace, have remained nearly stable since 1937 while outpatient visits has increased dramatically. Depending on the model chosen, this increase is equal to an average increase of 200,000 outpatient visits from the year immediately preceding the outbreak of hostilities, or an increase of 16,000 outpatient visits per year.

6. Physical space is at a premium at Martin Army Community Hospital. Within the next decade, action must be taken to procure more space for patient care areas while retaining mobilization expansion capability.

Recommendations for the Strategic Planner

Although the conclusions stated above are ominous and forbidding, much can, and must, be done to relieve the eventualities they pose. The recommendations for the strategic planner include:

1. The period of time most critical to the strategic planner should not be the period of mobilization and conflict, rather the strategic

planner should concentrate efforts on the period of time immediately following the initiation of an era of peace. The needs and requirements of that era historically have been unmet due to the insistence on focusing all efforts on expansion to meet a crisis. This effort is mandated by the situation at the time, admitted, however, becoming consumed in the efforts an era in which a -eritable cornucopia of resources are available without some focus on the famine years to follow is sheer folly. The focus today is on inpatient beds required for mobilization. Undeniably a major consideration, but what of the anticipated increase in outpatient visits after the hostilities have ended? The strategic planning effort must focus on this eventuality.

2. Prior to mobilization, the strategic planner must commit, in writing, a detailed plan for efforts which will satisfy both the expected increase in inpatient bed space as well as the post-hostility outpatient requirements. This plan must include these steps:

a. Immediately upon initiation of mobilization, the requirement for additional construction on Building 9200, Martin Army Community Hospital, must be dispatched with the highest priority through the necessary channels. The construction of either or both the E and F Wing of the hospital must begin as soon as possible.

b. The three adjacent BOQ buildings must revert to the control of the MEDDAC Commander. These facilities must then be converted to accept the overflow of inpatient and/or outpatient facilities disrupted

by the construction requested in the action above.

c. The blueprints for the E and F Wing must be modified from the beginning to prepare for the period of time after the hostilities cease. Modification should include the development of at least two floors which can be constructed as totally open bay areas, able to accept modular and removable walls and fixtures. Initially this area will be utilized as inpatient bed space, later a second modular unit will convert the wings into outpatient and/or administrative areas. This would result in a "swing wing" concept similar to the current civilian "swing bed" concept.

d. All modular units must be programmed for procurement while the hostilities continue. Repair and replacement parts, likewise, must be procured during hostilities. This necessarily means that the strategic planner must have in written form, the projected requirements prior to the advent of hostilities. Without such a plan, history will again repeat itself.

APPENDIX A
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APPENDIX B

AN ABBREVIATED HISTORY OF HOSPITAL CONSTRUCTION
AT FORT BENNING, GEORGIA

The following abbreviated history of hospital construction at Fort Benning, Georgia, has been borrowed, in its entirety, from two source documents, Archives 1964 and Archives 1969. These documents were consolidations of historical reports, written by authors long since departed from Fort Benning. My sincerest appreciation and gratitude is offered to them for their magnificent work. Likewise, my sincerest apologies for the numerous errors and omissions. I have used only a small portion of an otherwise lengthy report. It is my belief that we can learn from the mistakes of our predecessors, that there are no new errors to be made. Chronicled in these pages are errors and problems which sound so uniquely familiar that they may well be heard today echoing from the walls of our present day edifice.

BUILDING THE FIRST HOSPITAL

Late in May 1918, Colonel Henry E. Eames, then Commandant of the School of Musketry, Fort Sill, Oklahoma, with a medical officer on his staff, was sent to Columbus, Georgia, to inspect a proposed site for a separate service school for the Infantry branch. The facilities at Fort Sill were overcrowded because it was necessary to train artillerymen for immediate action in France. Other sites were also inspected, but on 20 September 1918, the Construction Division, Department of War, in Washington, D. C. was notified that the school at Fort Sill was under orders to move to Columbus and that the troops would arrive on or about October 1.

The final plans for the temporary camp were completed and blue prints drawn. Skilled and common laborers were hired through the assistance of the Chamber of Commerce. After just seven days, the temporary camp was ready for troops. The roads had been built, electric lights had been installed, water mains laid and the mess halls, warehouses and 300 tent frames were practically completed. The first detachment from the Infantry School of Arms arrived on October 6. The strength was three officers and a few hundred enlisted men. Captain Kindervater, Infantry, was the detachment commander, and 1LT Savart, Infantry, was his executive officer. The third officer, a member of the medical corps, is unknown. LT Savart, reflecting about his arrival at the camp some ten years later said, "The only things that looked anything like a camp was a little work that had been done on the hospital building." The entire camp was completed in

two weeks. The first hospital structure was a standard construction division structure described as an infirmary, two-story, 30 by 63 feet.

On April 25, 1919, the construction of the hospital for a camp of 5,000 men on a 4 percent basis (200 patients) was authorized by order of The Adjutant General. The project estimated the cost of the hospital at \$437,491.00. Funds would permit the completion of the hospital complex. The following buildings were authorized under project symbol No. 6022-7 and formed the hospital complex portion of the project:

- 1 - One-story Administrative and Receiving Building.
- 1 - Two-story Nurses' Quarters with Mess and Kitchen.
- 1 - One-story Animal House. This building to be built adjoining one of the existing buildings as recommended by the Commanding Officer.
- 1 - One-story General Mess and Kitchen with two mess halls, one for patients and one for Medical Department Detachment. Equipment to cook for 350.
- 1 - One-story garage or shop building.
- 3 - Two-story wards, K-117.
- 1 - Two-story Isolation Ward, Note: Isolated Ward M-104. M-104 and K-117 shall be built of metal lath and stucco instead of tile.
- 1 - One-story surgical and clinical building.
- 1 - Two-story Medical Department Detachment barracks.
- 1 - One-story storehouse and linen service building.
- 1 - One-story Warehouse.

- 1 - One-story Guard House which may be used as a psychiatric ward for detention purposes only. Interior of this building to be lined with 7/8 x 6" tongue and grooved flooring 7' high.

Each two-story ward group was to be connected by two-story corridor with a covered ramp at each end. All other buildings were to be connected by covered walks, and the surgical and clinical buildings connected to one of the wards by an enclosed corridor.

The end of World War I reduced military spending. The construction of Camp Benning did not escape Congressional scrutiny. The project was ordered shut down twice. The first time, Major Jones went to Washington and was able to get the order rescinded. However, on July 2, 1919, Congressional action ordered the project shut down and the Constructing Quartermaster to immediately discharge all construction forces except those necessary to secure the tools and supplies. The hospital complex was about 90 percent completed in carpentry. Completion of the utilities was as follows:

Steam heat	85 percent
Water	75 percent
Sewers	25 percent
Inside Electric Wiring	30 percent

A Board of Officers was appointed by the Department of War to recommend action to take in case construction should be resumed. One of these officers was LTC Conrad E. Koerper, Medical Corps, soon to be the first hospital commander.

It is not known when LTC Koerper arrived at Camp Benning. It was an advantage for him to be on the Board of Officers. This gave him the opportunity to make some changes in the design of the hospital which he was to command. These changes are not specified. It is presumed that they were designed to reduce the cost without reducing the medical capability. The buildings and estimated cost to complete the hospital complex are as follows:

<u>BUILDING OR UTILITY</u>	<u>NO.</u>	<u>APPROX SIZE</u>	<u>ESTIMATED COST TO COMPLETE</u>	<u>REMARKS</u>
Administration Building	1	1 story		Change Design
Nurses Quarters, Mess and Kitchen	1	2 story		Change Design
General Mess and Kitchen	1	1 story		Change Design
Garage and Shop	1	1 story		Change Design
Ward Buildings	2	2 story		Change Design
Isolation Ward	1	2 story		Change Design
Surgical and Clinical	1	1 story		Change Design
Medical Detachment Barracks	2	2 story		Change Design
Mens' Lavatory				
Storehouse and Linen Service	1	1 story		Change Design
Central Heating Plant	1	1 story		Change Design
<u>TOTAL:</u>			\$ 275,000	

The recommendations of the Board were generally approved. By a liberal interpretation of "new construction" in the congressional order to "cease all new construction," it was determined that at Camp Benning the task was one of completion rather than new construction. With this interpretation and the extensive use of troop labor, a sufficient portion of the hospital was completed to permit admitting patients late in 1919. The official opening was not until early in 1920. It was called the Station Hospital, Camp

Benning. The Commander carried the dual title of Surgeon, The Infantry School of Arms and Commanding Officer, Medical Detachment, The Infantry School of Arms. The Station Hospital was located near the corner of Ingersoll Street and Wold Avenue.

By mid-1920, the hospital complex construction was completed. There was space in the two-story ward buildings for nine wards. These were classified as: one surgical, two genito-urinary, one medical, one for examinations, one for officers, one for women and children, one isolation and one prison ward. In addition, there were clinics and ancillary services which were prevalent in that period. These were the eye, ear and nose clinic, dental clinic, genito-urinary clinic, laboratory service, medical service, nursing service, surgical service, and an outpatient department. The buildings in the complex were similar to a late 1800 frontier setting. This is not meant to be a reflection upon anyone associated with the construction. There had been no change in the construction plans for military hospitals since the 1800s. This type of construction was responsible for the later appropriation for hospital construction at the post.

The Infantry School of Arms soon expanded. An expansion of the School meant more student officers. The shortage of quarters on the post and travel time from Columbus to the hospital led to the opening of an Attending Surgeon's Office in Columbus in the Chancellor Building. Captain R. B. Bretz, MC, was in charge of this office. He was available for both office and house calls. The Attending Surgeon provided dependent outpatient medical care. There was no pediatrician. The Attending Surgeon cared for both adults and children. The outpatient department treated mainly officers. Enlisted

men were seen at aid stations near where they were quartered. There were two Attending Surgeons on duty at the post.

In November 1922, the scope of the operation of the Station Hospital was again extended into the city of Columbus. Another need was met by establishing a first aid station for colored troops. It was located on First Avenue between 10th and 11th Streets. Sergeant R. M. Farrell was in charge of the medical corps enlisted men operating the station.

Plans were developed for the construction of a permanent hospital. The name of the planner is not known; however, the hospital was to be of brick construction and have all modern apparatus and conveniences. In late January 1923, the House of Representatives added \$275,000.00 to the Army Appropriation Bill for the construction of the new hospital. The Senate later approved the appropriation. A member of the camp made this comment about the cantonment hospital complex: "The hospital facilities at this post have been anything but desirable and with conditions existing as they do, it is really remarkable that the doctors are able to do the wonderful work that they are doing. Also, the accommodations are not nearly large enough to take the proper care of patients and the present hospital is a huge fire trap should a fire ever happen to break out."

PERMANENT CONSTRUCTION BEGINS

In December 1923, the contract was let and construction started on the new hospital. The site selected for construction was on a rise of ground known as Richie Hill overlooking the Chattahoochee River and Upatoi

Creek valleys. E. A. Baehl and Company of Leavenworth, Kansas were the successful bidders. Construction of a hospital was not the only building at Fort Benning. The early 1920s were described as the second era of construction. Barracks, theater, office building, and the Memorial Stadium were started.

The new hospital opened on 20 May 1925 and it took three days to move the patients, clinics and equipment to the new building. Not all of the medical service could be moved into this area. Some of the old wooden buildings were used until 1929. The completion of the hospital was eagerly anticipated and marked the start of the fulfillment of a long felt need. A medical service which has functioned so well in the out-dated wooden structures was entitled to one of the finest station hospital buildings to be found in the United States Army.

The building was of the most modern design and thoroughly equipped with the most modern medical equipment. It was classified as fireproof throughout. The foundation was concrete, the outside walls of hollow tile and stucco and the roof of terra cotta tile. The floors were concrete covered with either linoleum or mastic tile. The majority of the door and window frames were steel, and all of the interior trim was hardwood.

A separate mess hall building and boiler plant were also built. All buildings were heated with hot water circulated by a large pressure pump. Live steam, under pressure, was also furnished to the kitchen and throughout the hospital building for sterilizing purposes.

The wards in the new building provided for 102 inpatients. A large solarium opening off of the third floor provided a place for the convalescents

to sun themselves in the open, all the while overlooking the activities of Fort Benning. The medical, surgical, dental, x-ray and the eye, ear, nose and throat clinics were also initially moved into the new hospital. LTC Paul S. Holloran, Medical Corps, was Commanding Officer of the Medical Detachment at this time and was responsible for the planning and orderly execution of the move.

The Secretary of War referred to the construction at Fort Benning in his annual report for fiscal year 1924.

"The only project involving permanent construction of any magnitude authorized during the past fiscal year was the continuation of construction work at Fort Benning, Georgia, at which place, plans and specifications were prepared and contracts let at the beginning of the year for 14 additional sets of Officers' Quarters and a hospital group consisting of a hospital building with a separate kitchen and mess and boiler house, capable of furnishing accommodations for 102 patients. It is expected that from time to time additional wards will be added which will increase the patient accommodations."

In May 1926, not long after the above report was published, the post Constructing Quartermaster, Captain William McK Scott, QMC, received plans and specifications for the construction of a laboratory building to be located in the rear of the main building of the new hospital. The foundation was to be of concrete with a cellar partially excavated in which will be located an animal room, store room and gas machine room. The first floor plan showed an autopsy room, viewing room, waiting room, office and three rooms devoted to laboratory purposes. The exterior

walls were to be of hollow tile covered with stucco to match the other buildings. The contract was let and because of the small size, the building was completed early in 1927.

Also listed among the permanent officers of Fort Benning in October 1926 was Major Dwight D. Eisenhower, Infantry. Among the officers attending the Infantry Company Officers Class starting in 1927 was Captain Joseph I. Martin, Medical Corps.

Early in 1928, Fort Benning was plagued with an epidemic of influenza. Medical facilities were greatly overtaxed, and most of the resources of the post were required to care for the patients. The extent of these resources were used is best described in the following General Order:

General Orders, No. 6:

Fort Benning, Georgia
March 6, 1928

1. Organizations of this command are commended for their hearty and efficient cooperation in assisting the medical department during the recent epidemic of influenza. The spirit shown by all members of the command in complying with suggestion of the medical department in the effort to limit the spread of the disease and to care for convalescents treated in quarters was most satisfactory. Without this valuable aid, the epidemic might and probably would have reached serious proportions.

2. In particular this commendation is directed to the following organizations:

(a) The School for Bakers and Cooks, under the direction of CPT H. C. Johansen, QMC, a detachment of cooks and mess attendants, under a noncommissioned officer, organized and equipped a hospital mess in temporary buildings turned over for hospital use and operated the mess for both patients and for enlisted attendants with economy and efficiency. Another mess was organized by CPT Johansen in the 29th Infantry tent area but this area was not required for hospital use.

(b) The Utilities Section of the Office of the Quartermaster: This section converted certain buildings assigned for use of the hospital into wards with gratifying promptness and efficiency and responded in a very satisfactory manner to the many demands for repairs and installation requested.

(c) The Property Section of the Office of the Quartermaster: With the least practicable formality all necessary property for equipment of the temporary wards was made available and delivered where needed. The cooperation of this office was so satisfactory that the Medical Department was enabled to increase the hospital capacity by over two hundred beds within a few hours of its request for service.

(d) Company "C", 15th Tank Battalion: On February 14, 1928, this organization was detailed to assist in the care of the sick and in operating the temporary hospital and for duty in the old hospital area. Both officers and men performed every duty required in a most satisfactory manner and with a willing and painstaking spirit that reflects the highest credit on the discipline and spirit of this organization.

3. This order will be read to each company or detachment at the first formation after receipt.

BY COMMAND OF BRIGADIER GENERAL COLLINS:

D. H. TORREY
Major, AGD
Adjutant

In the aftermath of the epidemic, it was easy to convince command that there was a great demand for more bed space in the area of the new hospital. By April 1928, work had begun on two separate ward buildings. These buildings when completed would increase the inpatient capacity to 200 patients. The basement of the new hospital contained the Attending Surgeon's Office, eye, ear, nose and throat clinic, the x-ray department, the pharmacy and storerooms; the first floor contained two large medical wards, a dental clinic, the medical library, and the administrative and records offices; the second floor housed the surgical wards and the offices of the Chiefs of Surgical and Medical Services; the third floor contained the wards for women and children and the operating rooms. The laboratory

service occupied its own building to the rear of the main hospital and was reported to be better equipped than the average Corps Area laboratory. The two new wards were completed in February 1929 at a cost of \$140,000. This permitted the centering of all medical activities on Richie Hill except the Outpatient Department, two wards, and the medical inspector's office.

Funds were received and work begun on a third ward and the nurses' quarters in July 1929. The nurses' quarters will house a total of 28 members of the Army Nurse Corps. The completion of ward #3 will increase the inpatient capability by about 50 beds.

Construction for the improvement of the medical facilities at Fort Benning continued during 1930. The nurses quarters and the third ward were completed. In addition, a dispensary was constructed on Wold Avenue across from the Tank Barracks. The Batson-Cook Company of West Point, Georgia was the contractor and the cost was \$54,354. Military sick call, the Office of the Attending Surgeon, and the Medical Inspectors Office were moved to this building. A dental clinic was also opened here. The porches on the wards in the main building and on Ward #1 were closed in to provide more space for patients. Separate steam and power lines were run to the porch areas. This separation from the main lines continually plagued the maintenance engineers. The most common complaint was that the radiators on the main ward were hot, while on the porches they were cold.

In October 1931, Colonel Manly, Hospital Commander from 1928 to 1931, received orders to the post of Ninth Corps Area Surgeon at San Francisco.

He sailed from New York on November 4. Colonel Manly was a very popular commander and many of the improvements in the medical facilities at Fort Benning are attributed to his tour of duty. Only because of his continued efforts to complete the hospital construction were additional buildings programmed in 1930 and 1931. The depression had virtually stopped all military construction; yet Colonel Manly was able to convince the Surgeon General and the Quartermaster General that the project started in 1924 should be completed.

WORLD WAR II EXPANSION

War clouds were forming in both the east and the west. The isolation concept and the slogan of World War I, "The war to end all wars," were still dominant in the minds of most Americans. This, coupled with the struggle to live during the depression years, made the thought of war unpopular. Even so, by 1939 the military leaders felt the need for a build-up. The troop strength at Fort Benning was increased during the period 1939 through 1941. The problems inherent to the medical service when the troop strength is increased will be related through the summation of several of the Annual Reports from the Station Hospital to the Surgeon General.

The Station Hospital served the garrison of Fort Benning which during 1941 had at times attained a strength of over 52,000. In addition to the greatly expanded Infantry School, Fort Benning was the home of the Second Armored Division and the station of the Fourth Motorized Division until the

last week in December when the division moved to Camp Gordon at Augusta, Georgia. Also stationed at Fort Benning were a number of Third Army and VI Army Corps troops, the Parachute Group and the most recently organized Airborne Infantry Battalion, the 88th. Hospitalization was provided also for C.C.C. patients from several companies located on the Reservation as well as a number of other companies located from 50 to 100 miles distant from Fort Benning. Until the opening of Lawson General Hospital in Atlanta, the hospital frequently received more serious cases from small posts and airfields in Georgia and Alabama.

The permanent hospital buildings served to meet the needs for hospitalization until the latter part of 1939 when the First Division arrived at Fort Benning for winter training. Even with the increase in the strength during November and December of 1939 following the arrival of the First Division, the average daily number of patients in hospital for 1939 was about 200.

<u>FOR YEAR</u> <u>ENDING</u>	<u>TOTAL PATIENTS</u> <u>ADMITTED</u>	<u>AVERAGE DAILY</u> <u>CENSUS</u>	<u>TOTAL</u> <u>BIRTHS</u>	<u>TOTAL</u> <u>DEATHS</u>
9/30/1937	4,342	213	116	44
9/30/1938	4,494	199	132	40
9/30/1939	4,333	192	143	25
9/30/1940	12,855	426	191	41
9/30/1941	23,694	1,001	321	37

The increasing demands for hospital beds was met and the high standard of medical care maintained in buildings and under conditions that were far from suitable for hospital use, during 1940 and 1941, was certainly a major accomplishment.

By the end of December, 1940, there were 825 patients in hospital

and 1,160 beds in operation. The hospital load increased steadily until the middle of March 1941, when it reached a peak of 1,904 with over 2,300 beds set up. At that time, the hospital had expanded to include the permanent detachment barracks, the entire three-story barrack building formerly occupied by the 83d Field Artillery, part of another three-story barrack building and several barracks in the 4th Medical Battalion of the Fourth Division about 10 miles from the main hospital.

Fortunately, the difficulties of 1940 and the first six months of 1941 were forgotten with the completion and occupation of the new cantonment type hospital directly across Baltzell Avenue from the permanent hospital. On December 9, 1940 work was started by the Mion Construction Company of Atlanta, Georgia, on a cantonment type hospital of 1,415 beds. The contract was completed May 6, 1941 at a cost of \$1,100,000.00. The new wards were immediately occupied by transferring patients from the hospital annex located in the 83d Field Artillery barracks. Due to a reduction of patients, hospital cases from the other annexes had been concentrated in the 83d area.

Following is a list of the buildings erected under the Mion Construction Company contract:

<u>TYPE OF BUILDING</u>		<u>NUMBER</u>	<u>BED CAPACITY</u>
W-1 Ward Standard	33 beds	28	924
W-2 Ward Combination	26 beds	16	416
W-8 Ward Detention	25 beds	3	75
C-4 Clinic Surgical X-ray		1	
C-1B Clinic, Laboratory and Pharmacy		1	
DC-2 Dental Clinic		1	
C-7A G.U. Clinic		1	
I-2 Infirmary		1	
PY-1 Physio Therapy		1	
A-3 Administration		1	

<u>TYPE OF BUILDING</u>	<u>NUMBER</u>	<u>BED CAPACITY</u>
HQ-24 Nurses' Quarters	9	
M-18 Patients' Mess	2	
M-28 Nurses' Mess	1	
MO-4 Morgue	1	
E-1 Post Exchange	1	
SH-6 Storehouse	1	
SH-7 Storehouse	5	
HBH-19 Boiler House	1	

As a result of a recommendation made by the Surgeon under date of December 30, 1940, steps were taken to secure authorization for construction of additional wards and buildings necessary to bring the bed capacity of the hospital up to 2,000 beds. A contract was awarded the Murphy Pound Company of Columbus, Georgia, on June 19, 1941 for the construction of the following buildings:

<u>TYPE OF BUILDING</u>	<u>NUMBER</u>	<u>BED CAPACITY</u>
W-1 Ward Standard 33 beds	10	330
W-8 Ward Detention 25 beds	1	25
HQ-24 Nurses' Quarters	3	
HQ-18 Officers' Quarters	1	
SH-13 Storehouse	1	
HR-5 Patients' Recreation Building	1	
SP-9 Hospital Utility Building	1	

This contract was completed and accepted on September 17, 1941 at a cost of \$202,000.00. All of the additional wards were equipped and some of them occupied. The quarters, warehouse, utility shop and recreation building were also occupied.

The constructed bed capacity of the cantonment type hospital was 1,770. That of the permanent hospital buildings was 228 making a total of 1,998. This total could be expanded to at least 2,500 by the utilization

of porches of the permanent construction and the solarium of the wards in the cantonment type construction.

It was believed that the number of available beds would be sufficient to meet normal needs of Fort Benning during World War II.

In addition to the hospital buildings, eleven two-story, 63-men barrack buildings and three dayrooms for the Detachment in rear of the permanent barrack building were constructed. Another temporary barrack building was built in rear of the Main Post Dispensary to house enlisted men on duty in the Dispensary and in the Induction Station.

The permanent hospital buildings were devoted exclusively to the Surgical Service, since the third floor of the main building had three large airconditioned operating rooms, with adequate work areas, sterilizing facilities, etc. The C-4 building which is the standard surgical and x-ray clinic building for a 2000-bed cantonment type hospital was inadequate to handle the surgical service and certainly must have proven to be inadequate in other 2000-bed cantonment hospitals not having permanent buildings as those in existence at Fort Benning. Many of the inadequacies of other administration and clinic buildings in the standard 2000 bed hospital plant were reported and corrected by the conversion of ward buildings to other purposes or the construction of additions to existing buildings.

The ward buildings of the new construction were satisfactory for the purpose for which intended. The hardware used on doors was of the cheapest quality, and within a short time all had to be replaced. Doors to private rooms in W-2 wards were too narrow to permit a bed to pass. Due to green

lumber used in the construction, floor boards, screen doors, windows, etc. warped and required constant maintenance. Innumerable leaks in the roofs appeared after heavy rains. Attempts to control leaks were made by apply a tar compound to the seams in the roofing paper but this method was not entirely successful. The floors of the wards presented a very difficult maintenance problem. The sealer applied to the floor by the contractor evidently was of a poor grade, and it did little to protect the floor. The hospital was unable to obtain any of the water soluble floor wax recommended for use on these floors. The floors of the corridors, which under the terms of the contract were not treated with a filler, were rapidly becoming stained, warped and splintered. No satisfactory method of cooling the new wards during the long and excessively hot summer months had been worked out. In 1941, this matter was the subject of considerable correspondence with the Corps Area Surgeon's Office and the Surgeon's Office. From experience gained during the previous summer, it was believed that the simplest and least expensive method and one which would give a reasonable amount of relief was the use of two large air circulators (Emerson) in the large wards, with small 12" fans in the private rooms. However, requests to purchase such circulators from medical funds or the Hospital Fund were all disapproved, and the hospital faced the prospect of another hot season without any provision for relief from the heat in the wards. The installation of exhaust and circulating fans in the attics of the ward buildings could also correct the condition. If any corrective measures to relieve the unsatisfactory conditions existing in the wards were to be undertaken, work should be started at once as the type of equipment required was becoming more difficult to obtain.

It was difficult to control the heating system in the wards particularly in the W-2 type wards with the 10 private rooms, because the steam distributing lines were uninsulated and ran through the ward rather than under the floor of the ward. Even though the valves on all radiators in a ward were closed, there was at least 450 feet of uninsulated steam lines in the building which could not be controlled other than by shutting the steam off entirely. There was, therefore, either no heat or too much heat. Even in summer time with all heat turned off in the heating system, the high pressure steam line to the hot water generators runs down the central corridor of the ward to the latrine where the generator was located. Even though the steam line in this section was insulated under the terms of the contract, it still gave off an excessive amount of heat. This could have been eliminated by running the line under the ward rather than through the ward. With the steam distributing lines all running overhead through the ward, all valves, gauges and connections were located in the corridor directly over the entrance doors to the ward. These valves and connections required excessive maintenance because they were constantly developing leaks which dripped on the corridor floors. Had these steam lines to the wards with the valves, gauges, etc., been placed under the buildings as was done in some of the other cantonment type hospitals, these difficulties could have been eliminated. Investigation was made as to the possibility of insulating these lines as it would be prohibitive in cost to relocate the lines under the wards.

Messes in the new hospital construction were excellent as regards kitchen equipment and cafeteria service facilities. The storage space

was inadequate for food supplies, other than cold storage. During the summer, the kitchens were unbearably hot. Steps were taken to remove the masonite ceiling and install a cupola type ventilator along the entire ridge line of the kitchen in hopes to relieve the heat.

The Nurses' Quarters built under the first contract were unsatisfactory because of inadequate bathing facilities and the location of the Reception Room on the side of the building. In the quarters built under the Murphy Pound contract these conditions were corrected by the conversion of one bedroom into an additional shower room and by locating the Reception Room on the end of the building. This provided a larger room and one much more accessible and more suitable for visitors. The 3 W-8 type wards constructed under the first contract were converted by the Quartermaster according to plans furnished and were believed to be entirely satisfactory. The W-8 ward constructed under the Murphy Pound contract was built according to latter plans and specifications. One defect noted in this type of ward, however, was that the radiators in the individual rooms were not provided with a shut-off valve. The only way that these radiators could be turned off was by crawling under the ward building.

When the contract for additional buildings was awarded, authority was obtained to make certain changes in these buildings which made the last wards constructed more suitable. The walls of these wards were covered with wood wainscoting to a height of approximately five feet and with masonite over the balance of the wall and the ceiling. The wainscoting was painted but the masonite was left in its natural color. This

greatly improved the appearance of the ward. The doors under this contract were not painted but were stained and varnished. This was a great improvement over the painted doors throughout the other wards. In these wards the steam lines ran under the building and the hot water generator was placed in a small lean-to outside of the building, thus correcting one of the most unsatisfactory construction defects in the original wards, namely, the location of hot pipes and generator in a latrine within six inches of the urinal. The location of the generators in the new wards proved to be such an improvement that the generators in all the other wards were moved outside the building.

The original plans for the cantonment hospital provided no roads through the area. The only buildings that could be reached by ambulance, truck or fire fighting equipment were those situated on the periphery of the area. After completion of the buildings and before the Surgeon would move patients into the wards, the Constructing Quartermaster built a road in the rear of each row of wards. In building this road, it was necessary to cut through all of the vertical connecting covered corridors. The clearance in these opening was not over nine feet in most instances; or less than the height of a truck with the top up. This condition was corrected by raising the steam lines and the roof of the corridor over the roadway to give a clearance of eleven feet.

Another serious defect in the original plans was the absence of doors in the covered corridors connecting the wards. This was corrected by installing a double door in the corridor in front of each ward.

Bermuda grass was planted along the roads in the new area and between the wards where the original sod was removed. The entire area was covered with compost during the winter months. A great deal of shrubbery and many small trees were planted in the new area. The permanent hospital had a spacious bermuda lawn in front, with many long leaf pine trees, large oak and hickory trees providing shade. Other than upkeep, the grounds of the old hospital required no beautification, permitting all efforts to be expended on the new area.

Patients admitted to Station Hospital in 1941 comprised the usual types expected from a command of from 40 to 50 thousand troops. During the year there were two motorized divisions on the Post, the Fourth Motorized Division and Second Armored Division and the Provisional Parachute Group, thus the number of orthopedic and injury cases was proportionately larger than would normally be expected. This hospital continued to admit obstetrical cases and dependents of military personnel for emergency medical and surgical conditions. The obstetrical service grew tremendously and required the entire time of two medical officers. There were 372 births during the year 1941. The opening of Lawson General Hospital at Atlanta modified the clinical character of patients in the hospital. The more chronic medical cases and many fracture cases were transferred to that hospital.

With the establishment of the Post Surgeon's Office in 1941, the outpatient services were placed under the control of that office. An outpatient service for officers and dependents living on the Post and

staffed by four medical officers was maintained in Dispensary "A". To provide medical service for the military personnel and their families living in Columbus, an outpatient service located in the Doctors' Building at 1310 Broadway Street, Columbus, was established January 20, 1941. Four officers were on duty in this dispensary; two being furnished by the Station Hospital and two by the tactical units. A dispensary known as the Enlisted Section, Dispensary "A", serving the units without attached medical personnel, was operated in two large wooden buildings located in rear of Dispensary "A". The number of officers on duty in this dispensary varied from 4 to 10 depending on the volume of work and on the number of inductees examined. Prior to the completion of the new induction station in December, all physical examinations were accomplished in the enlisted section of Dispensary "A". With the expansion of the Infantry School, it was necessary to operate three additional dispensaries for student officers. The further expansion of the Infantry School, in the area vacated by the Fourth Division, made it necessary to open three more dispensaries for officer students and students attending the officer candidate school.

On May 28, 1942, the Williams Lumber Company of Columbus, Georgia, was awarded a contract for eleven ward buildings and one 63 man, two-story barrack building, at a cost of \$290,000.00. This construction was completed on September 1, 1942.

The cantonment type hospital, with its barrack buildings and quarters represented a construction cost of \$1,592,000.00.

On September 15, 1942, 26 theater of operation-type and modified mobilization type buildings for housing an evacuation hospital were completed. These buildings were located approximately one-half mile south of the hospital area and were being used for the housing of numbered hospital units assigned to this station for organization and training.

On August 27, 1942, a contract was let to the Williams Lumber Company, of Columbus, Georgia, totaling \$1,113,000.00 for the construction of Unit No. 2, Station Hospital. This hospital was a self-contained unit consisting of 54 buildings and located in the Harmony Church Area, approximately six miles southeast of the present hospital. It was a 557 bed unit on the standard 1,000 bed plan. It was ready for occupancy early in February 1943.

The type of construction of Unit No. 2 was better than the construction of the first cantonment hospital. The exteriors of all ward buildings and clinic buildings were covered with asbestos shingles. This improved the appearance of the buildings and reduced the fire hazard, at least from fire from adjacent buildings. It should be stated that in the last eleven wards built in Unit No. 1, the same type of exterior construction was used. The roofs of all wards and clinic buildings in Unit No. 2 were shingled with asbestos strip shingles. All steam lines for the wards ran underneath the wards, thus correcting the serious defect in the first 1,415 beds, built in Unit No. 1.

A concrete firebreak through the center of the hospital was built. No such firebreak was included in Unit No. 1. The clinic buildings in Unit No. 2 also had better interior design. In Unit No. 1, the EENT clinic and laboratory were included in one building; in Unit No. 2, each had a separate building and the excessive crowding was eliminated.

The basic military training of newly appointed officers at a large and busy Station Hospital presented a difficult problem. The ever present need to place a newly arrived officer in charge of one or more wards to take care of the sick occupied his entire time and prevented the carrying out of any sustained and definite program of basic training. It was unfortunate that all newly appointed officers, without prior military training, could not be given a course in basic military training before assignment to a hospital where they must immediately be placed on professional duty. The number of Medical Corps officers assigned to this station had, at all times during the past year, at least in the opinion of the Post Surgeon and the Commanding Officer of the Station Hospital, been below the minimum requirements. There was a heavy turnover of officers. Sixty-two medical officers, seven dental officers, two Sanitary Corps officers, and six medical administrative corps officers had, after varying periods of duty at this station, been transferred away. Replacements were almost invariably officers without previous military experience. Five officers attended the basic course at Carlisle, and five attended courses of instruction at the Army Medical Center. Half of these were transferred to other

stations.

Equipment for the expansion of the Station Hospital was adequate. Supplies, as a rule, were promptly received and were of excellent quality. The shortage of certain critical items of medical supply did not in any way lessen the quality of the professional service rendered.

Ambulance transportation was adequate. Truck transportation was frequently inadequate, due to the shortage of trucks available in the Post Motor Pool. All trucks supplied the hospital were dispatched from this central motor pool.

Under the direction of the Assistant Field Director, American Red Cross, a very active welfare, social service and recreation program was carried out. The hospital had an HR-5 type of recreation building. In addition to the Assistant Field Director in charge of Red Cross activities, the staff consisted of six social service workers and five recreation aides. A total of thirty-three Red Cross workers were sent to the Station Hospital for training prior to their assignment to other medical installations or numbered hospital units. The Red Cross personnel assigned to the numbered general and station hospitals which were in training at this station during the year worked in the hospital recreation building under the direction of the Assistant Field Director. For the enlisted duty personnel, adequate and varied recreational facilities and activities were provided by the Post Recreation Officer.

The demands on the professional service were greatly increased by the large number of dependents living on the Post. They had always received dispensary and hospital treatment and continued to expect it. Dependents living off the Post were, as far as possible, given the same service as those living on the Post. Dispensary service was provided in the City of Columbus, as well as on the Post proper, for dependents of military personnel. Emergency medical and surgical cases of dependents were admitted throughout the year. The size of the obstetrical service perhaps illustrates best the demands on medical officers for the care of dependents. There were 721 infants born in the Station Hospital during the year 1942. The number of obstetrical cases requesting admission to hospital increased so rapidly during the latter part of the year -- there were 74 admissions in October, 83 in November, 82 in December -- that it became necessary to limit the admissions for delivery to a maximum of sixty in any one month. Facilities and personnel did not permit the proper care of a number in excess of sixty. Prenatal and post natal clinics, and also a large and active gynecological outpatient clinic were also operated. These clinics functioned six days a week.

The problem of maintenance and repair in connection with the Station Hospital, particularly the cantonment section of it, was an ever present problem. Since the first of July, 1942, when all repair and maintenance work at the hospital was turned over to the Post Engineer, repair and maintenance had been unsatisfactory from the

standpoint of the Commanding Officer of the hospital. Prior to this change, there was at the hospital, a crew of carpenters, plumbers, steamfitters, painters and electricians sufficient for normal upkeep and repairs. Beginning July 1, 1942, the mechanics were either discharged or withdrawn from the hospital and placed in the Post Utilities' shops. To obtain repairs, even of the most minor nature, necessitated either a phone call or sending a memorandum to the Post Engineer. Emergency repairs, such as a stopped-up toilet, could not be made with the promptness formerly available since it was necessary for the plumber to come from the Post Engineer's shops, approximately a mile and a half distance from the hospital.

In spite of the foregoing, a considerable number of projects were accomplished which added to the appearance of the hospital, the comfort of the patients and the improvement of conditions in general. The majority of these projects, however, were accomplished, or the contracts were let and the money obligated prior to the consolidation of maintenance crews. A brief description of these projects follows:

In the HQ-24 Nurses' Quarters, additional bathing and washroom facilities were installed by converting one bedroom into a bathroom, with three showers and three additional wash basins.

Ventilating fans were installed in 25 of the cantonment wards. Fans were also installed in the cantonment mess halls and in several clinic buildings and in the nurses quarters.

Work on covering approximately one-half of the wards in the cantonment area with chromalin floor began in December. Additional funds were

received by the Post Engineer to provide floor covering for 20 more wards.

Additions were built to the two patients' messes in the cantonment construction, increasing cold storage facilities and food storage space. These proved inadequate in the original construction.

The steam plant in the temporary construction was connected with the heating plant in the permanent hospital construction and a stand-by crude oil conversion was added to the cantonment plant. In the event of failure of the natural gas, which had happened in the past, steam for the entire hospital could be provided from the cantonment heating plant by conversion to oil burning. Conversion time was estimated at two hours.

The lack of clearance where the roads in the temporary hospital area passed through the corridors was corrected by elevating the roofs of the corridors and the steam and water lines that were carried in the corridors. A minimum clearance at all of these corridor crossings was fourteen feet.

The automatic sprinkler system was extended to the ten wards built by Murphy Pound Company. These wards had been in use without this protection for approximately one year. The eleven wards built by the Williams Lumber Company in the last expansion were equipped with the automatic sprinkler system at the time of construction. The hospital recreation building was the only remaining building not protected by a sprinkler system. However, estimates were submitted by the Post Engineer on this project and

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A STUDY TO DESIGN A FUNCTIONAL SPACE UTILIZATION
PROGRAM FOR IMPLEMENTATI.. (U) ARMY HEALTH CARE STUDIES
AND CLINICAL INVESTIGATION ACTIVITY F.. D J BRUSS

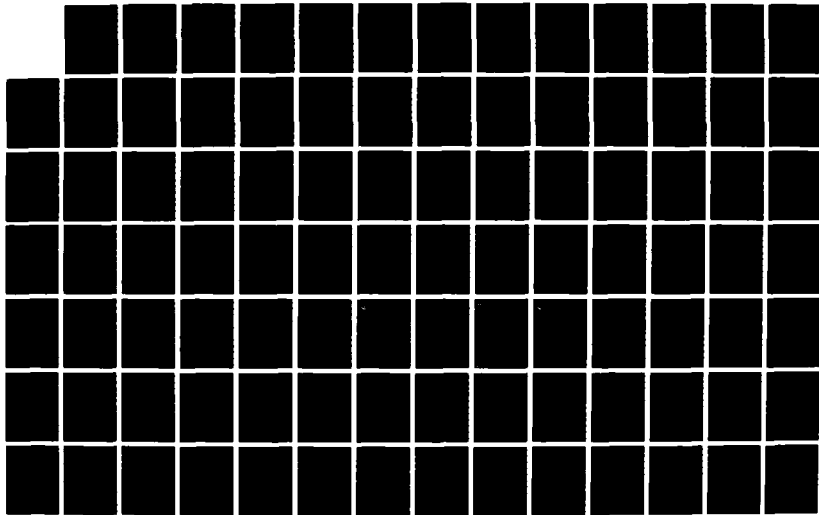
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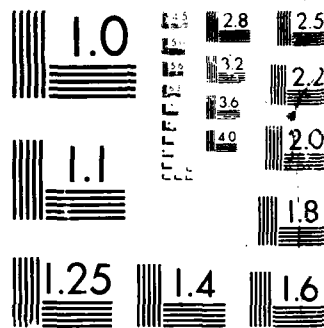
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automatic sprinklers were installed early in 1943. The electric alarm system for the cantonment area was not yet completed. The wire lines and alarm boxes were installed, but completion delayed due to the shortage of essential parts.

A fire station had been completed in the hospital area, and a fire truck and crew are on duty there.

All of the roofs of the wards of the cantonment construction were recovered during 1942 with asbestos strip shingles. This improved the appearance of the buildings considerably and eliminated leaks in the original roofing. Roofs of all other buildings in the cantonment area, other than wards, were patched by applying strips along the seams of the roofing paper. They still continued to leak from time to time and were not as satisfactory as those buildings which were shingled.

Among the more important improvements made in 1942 to the permanent hospital construction were the following:

The halls and corridors of the three-story main building were tiled to a height of five feet. The main kitchen, hall and all diet kitchens in the permanent construction also had tile applied to the walls. The old concrete floor in the main kitchen and mess hall was tiled. The walls of the operating rooms, formerly painted plaster, were tiled to a height of approximately ten feet. An additional large operating room was provided by tiling the walls and floors of a room in the Surgical Section previously used as an obstetrical and gynecological clinic room.

A large Surgical Clinic and dressing room was established on the

first floor of the main hospital building in the section originally designed as the hospital Dental Clinic. It proved invaluable in the treatment of accident and emergency cases. The walls of this room were tiled and a terrazo floor installed.

In three of the large wards of the main building, the worn linoleum floor covering was replaced by rubber tile in two of the wards and by linotile in the third.

A forty-foot extension of concrete and hollow tile construction was added to the storeroom of the permanent hospital kitchen. This provided storage space for food supplies.

An extension to the ambulance shed to house the three Metropolitan ambulances, and a forty-foot extension to the hospital paint shop were also completed during the year. Both of these extensions were permanent construction.

Painting of all of the permanent hospital buildings, both inside and outside was completed during the year.

Acoustical tile was installed on the ceilings in the halls, corridors, and diet kitchens of the main hospital building and the ceiling of the permanent kitchen and mess hall. The original hospital construction acted more or less as a sounding board. A door slammed in the basement on the first floor could be heard throughout the building. The rattle of dishes in the diet kitchen was extremely annoying to sick patients. The improvement in this condition could not be appreciated by one who was not

familiar with the hospital prior to the installation of the acoustic tile.

Unit No. 2 of the Station Hospital ran throughout most of the year. It was officially opened in February with a sufficient staff and enlisted personnel to prepare the unit for a reception of patients. Having decided that the unit should run as a reconditioning center, it was organized without nurses and with a minimum of professional personnel. No separate records were kept except a continuation of progress notes on patients. The Main Hospital Registrar, Personnel Officer, Adjutant, Mess Officer, Detachment Commander, etc., were represented by assistants and the entire operation was, administratively, an annex. Convalescents, mostly surgical, were received from the Main Hospital by informal transfer. This unit was located in the Harmony Church Areas on a beautifully planned and terraced acreage. It received favorable comment from visitors, both from the Office of the Adjutant General and the Office of the Surgeon General. It was also described in some of the largest newspapers in the South. Many personal interest projects were developed. Courts for outdoor games were constructed; a sodded sanitary area was built for instruction purposes; a Victory Garden, a miniature golf course, rose gardens, flower beds, rustic parks, fish ponds, boarded walks, massive park and roadway entrances were made by patients who recovered their health without realizing that their play was therapeutic. An earnest effort was made to gain a definite recognition for this unit as a reconditioning center, to

have more patients transferred in from nearby General and Station Hospitals, and to use it to its fullest extent of 557 beds.

There were the same outpatient clinics for military dependents as in 1942, and only emergencies were admitted to hospital. The Obstetrical Service continued as last year, civilian nurses and maids were employed and paid for by the patients. The cost was approximately \$3.00 per day, and since the normal delivery was discharged at the end of seven days, \$21.00 was the usual charge for the lying-in period. There were 738 births, including five sets of twins, and nine deaths, six of which were due to prematurity. Other than deliveries, there were 927 operations in the Obstetrical and Gynecological Service. Because of lack of facilities, admissions were held to approximately 60 per month. Many deserving cases were refused admission. There was a crying need for an expansion of this service, and a move was made for such an enlargement of facilities. The Prenatal, Postnatal and Gynecological Clinic was crowded six days per week.

The only new construction during the year was a LCT 20 by 32 foot laboratory and a RB-8-T building which was modified to be a 20 by 50 foot dayroom for colored personnel at Unit No. 2. Also, there was the small addition made to the Red Cross building mentioned above.

Painting (one coat) of all the buildings in the cantonment area in the Main Hospital, except the eleven wards of the last construction (Williams Lumber Company), was started.

The light colored chromatin covering in the wards and corridors

was difficult to maintain. It was easily and almost indelibly marked by rubber heels and soles and rubber tires on all carts. The boots and shoes worn by paratroopers were the principal offenders.

An automatic sprinkler fire protection system was installed during the year in the Recreation Building of the Main Hospital. The sprinkler and automatic alarm system now covered all wards and hospital buildings in the two units.

Maintenance and repair remained a problem and a source of delay. The necessity of sending memos and letters for consideration and approval for minor repairs and small alterations delayed the work and prolonged the defect, even if the normal channels were open and response was as direct as possible. The Hospital Commander felt that the staff knew its own needs sufficiently well, that nothing would be gained by a review of requests by another branch of the service unfamiliar with the needs. The Commanding Officer of a hospital should be considered capable of the proper expenditure of the necessary emergency materials which could be kept on hand in small quantities.

The integration of maintenance and utilities was prescribed by higher authority. The Post Headquarters and the Post Engineer, like the Medical Department, were handicapped by lack of personnel. Delays in certain requested projects were frequently attributable to the requesting officer failing to differentiate between ordinary maintenance, alteration and new construction. Requests were received in which projects of all three of the above classifications were included. Ordinary or emergency

maintenance was sometimes delayed due to shortage of material in the hands of the Post Engineer. Alteration or any new construction was obviously delayed until it could be definitely established as in accordance with current directives concerning nonrecurrent projects.

The closing of Hospital Unit No. 2 early in 1944 contributed to the overall war effort by conserving personnel and the expense of operation. During the time that this unit was in operation, it contributed greatly to the war effort by returning soldiers to their respective units physically and mentally qualified to take their places in their unit combat team. The unit was ideal in that it was entirely separated from Hospital Unit No. 1 by a distance of several miles. Soldiers transferred to Unit No. 2 were thus completely removed from a hospital atmosphere. These soldiers were not considered patients. They trained as companies of soldiers. The routine was that of military discipline, ceremonies, and combat training. Relaxation was assured by group games and opportunities for the pursuit of individual talents and hobbies. Recovery was attained by natural stimuli to muscles and joints incident to active and voluntary use. The esprit de corps of the members of this unit was of the highest. An opportunity was afforded for the correction of all dental defects. Two medical officers conducted the program. The remainder of the staff was composed of Medical Administrative, Sanitary, and Infantry officers. The Infantry officers were loaned from the Infantry School. Once weekly the soldiers

undergoing training were checked by medical officers from the Orthopedic and Medical Services of Hospital Unit #1. The military training, training films, the use and care of the individual weapon as given by Infantry officers fully conversant with their branch, were the backbone of the success of the unit. The evolution and progress of the unit showed the soundness of the basic principles of entirely separating soldiers from a hospital environment, of handling these soldiers as soldiers and not as patients, of filling the entire day with a program aimed at returning each individual to his unit physically and mentally qualified to do his full share. All this was accomplished. The physical structures of the unit remained. The only requirement would be the personnel necessary to staff the unit if the war effort so indicated.

As soon as the war was over, demobilization began. The heavy workloads previously experienced at the induction stations were now transferred to the separation points. The separation physicals were given in a temporary building complex to the rear of Dispensary "A". Only those who required extensive hospitalization turned themselves in on sick call. The overseas sick and wounded were processed out of the service with medical disability as rapidly as possible, then, the return to the routine of peacetime medical service.

The United States Army Hospital, after the closure of Lawson General Hospital and other similar facilities, was the major Army Medical Facility in the Army area. Unusual cases, beyond the capability

of the smaller area hospital, were evacuated to Fort Benning. Likewise, cases requiring specialized care or equipment not available at this Station Hospital were transferred to the General Hospitals. Air evacuation of patients which had proven itself so well in World War II was used almost exclusively.

This was also the period when medical officers who had trained under the ASTP (Army Specialized Training Program) were finishing their pay back time. This resulted in a large turnover of professional personnel.

Remodeling and redesigning the main and cantonment hospitals was a continual task. Unfortunately, the greater need was resolved and usually on a piecemeal basis without considering the entire plant. Brigadier General Robert B. Hill, the Surgeon in 1948 believed that a medical center should be developed and built at Fort Benning. This was discussed with the Commanding General and was presented to the Post Planning Board. The personal interest of General Hill probably instigated the formal planning for a new hospital.

THE KOREAN WAR

Just five short years after the end of World War II, the Korean conflict called for another expansion. The Surgeon General authorized an increase to 3,000 beds. The Harmony Church Unit No. 2 which had been inactive gave the hospital this capacity but there was never a requirement for this number of beds.

A program of rehabilitation of the United States Army Hospital was carried out during the 1951 calendar year. The Hospital Cantonment Area was rehabilitated. The cost of this rehabilitation was slightly in excess of \$152,000. This rehabilitation included modernization of the Outpatient Department, expansion of the OB Service, air-conditioning of four wards and three clinics, installing kitchen equipment and other modern conveniences in all of the wards, expanding and modernizing the Physical Examination Center and EENT Clinic and painting the interior of all wards and corridors. Exterior painting was also done.

The permanent buildings of the hospital were rehabilitated at a cost of \$248,582. The major improvements consisted of installing floor coverings, fluorescent lights, interior painting of most wards and administrative offices. The X-ray facilities and some diet kitchens were rearranged or relocated and additional storage facilities and an office added in the operating room area. An Orthopedic Brace Shop was opened and completely equipped. Construction was started on additional parking areas to accommodate.

Five unnumbered buildings were removed from the hospital area and the hospital grounds improved. The latter consisted mainly of a vigorous program towards establishing better lawns and flower beds.

Advanced planning for a new hospital was completed. These plans were submitted through channels to the DA for such consideration as may be warranted.

At the early part of the year, there were 11 military dispensaries in operation. More efficient use of locations and better concentration of troops reduced this number to six by December 1st. These six dispensaries were able to furnish adequate outpatient service to all field and station units. Due to the shortage of Medical Officers and enlisted personnel, every effort was made to operate these dispensaries with personnel from General Reserve Units and by using medical personnel assigned to line units. This system was beneficial, not only in alleviating the shortage of personnel assigned to the Surgeon for this purpose, but in affording General Reserve Medical personnel an opportunity to obtain on-the-job training for their mission in the field.

Medical service for dependents and other non-military personnel was available in two outpatient dispensaries, Dispensary A-9 located in the Main Post Area and Columbus Dispensary located in the Martin Building. Medical care of dependents was the largest and busiest activities at this post. It was estimated that upwards of 50,000 dependents reside in the area. It was not surprising that about 200 patients were seen every day in these two dispensaries. It was necessary to increase the number of doctors on duty after normal duty hours in an attempt to cope with this load. Dispensary A-9 was open at all times. There were never less than three doctors on duty at

any time. It was difficult to maintain a staff large enough to accommodate all these patients, especially medical officers. The number of medical officers assigned varied from a low of three to a high of seven. It was estimated that ten medical officers would be required to furnish adequate outpatient service. To illustrate the volume of work performed by these two dispensaries, a few statistics are shown as follows: Total visits - 70,396; total number of treatments given - 91,305; in addition, there were 17,502 immunizations administered and 65,088 prescriptions filled. The above figures do not include patients referred to other clinics for more specialized treatment.

The inpatient load was correspondingly heavy and seven wards of the hospital were devoted entirely to dependent medical care and on occasion other wards were utilized. Retired personnel, veterans and male dependents were often placed on wards designated for military patients. The clinics in the hospital devoted a large portion of their time to dependent work. At least 50 percent of the time involved in furnishing medical service was occupied with dependent care.

At the beginning of 1952, all of the surgeon's activities were consolidated under one major headquarters, known as the Provisional Medical Group. This headquarters controlled operations and administered the hospital, Dental Detachment, TIC, all separate medical and dental TOE units and other medical functions. The surgeon commanded the Provisional Medical Group.

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When SR 40-610-5 was received and reorganization of the hospital in accordance with its provisions was initiated, it became evident that continued operations under one central headquarters would entail many difficulties. The deletion of the Adjutant in the hospital (except in name only, for the purpose of authenticating hospital special orders) and the fact that a staff of S-1, S-2, S-3 and S-4 could no longer adequately serve all operations, resulted in the decision to reorganize the entire medical complement.

General Orders 29, Headquarters, The Infantry Center, 7 May 1952, established two separate major medical commands; the Provisional Medical Group was given the mission of command and administration of the TOE units and the United States Army Hospital designated to operate all station type medical facilities. The T/D medical and dental units were attached to the hospital for command and administration. The surgeon retained command of both major units. The Headquarters, Provisional Medical Group, was initially operated by the Headquarters and Headquarters Detachment, 64th Medical Group. After it departed this station, the Headquarters and Headquarters Detachment, 54th Medical Battalion took over these functions.

There was a decrease in admissions as a direct result of a vigorous program in the outpatient activities. This program was designed to eliminate, whenever possible, hospitalization for conditions which could be treated on an outpatient basis. Many expedients were employed to

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effect this program - walking casts for minor leg injuries, written instructions to patients for home treatment with planned follow-up procedures, and more definitive work in dispensaries were but a few measures which were adopted. The assistance of unit commanders lent the greatest impetus to this policy. A great deal of credit is due these officers for their interest and cooperation in utilizing soldiers with minor injuries or ailments in the unit according to recommendations of medical officers.

Rehabilitation of buildings in 1952 consisted of the following:

- a. Six cantonment area Nurses Quarters rehabilitated at a cost of \$60,000.00.
- b. One cantonment obstetrical ward altered to include two additional nurseries.
- c. Major repairs to floors and counters of one cantonment patients mess.
- d. The EENT Clinic received alterations to accommodate an additional optometrist.
- e. Flood lights installed around Nurses Quarters for security of occupants.
- f. Air-conditioning systems in two cantonment outpatient facilities converted to optional use - hot or cold.
- g. All corridors and ramps in the hospital cantonment area were repainted.

h. Construction of a fire-resistant vault in a cantonment warehouse building.

i. Mechanical ventilation installed in all temporary buildings.

j. Temporary troop barracks received major floor repairs and other rehabilitation to place buildings in first-class condition. Permanent barracks housing TOE medical units received extensive plumbing and latrine rehabilitation.

During the year, six area dispensaries were operated. A seventh was opened during the ROTC encampment. Four of the permanent dispensaries were repainted during the year and oxychlorate flooring was installed in one dispensary in the main post area.

The two dependent dispensaries exceeded the amount of work performed in 1951. A total of 119,282 outpatient visits were made as compared to 70,396 in 1951. This increased workload was correspondingly felt in other hospital departments. Of the total admissions, about 45 percent were civilians and since the first of September more dependents were admitted than soldiers. About 20 percent of the hospital staff was devoted full-time to dependent care and others contributed a good portion of their efforts to this end. It is for this reason that the recommended allocation of medical officers and nurses was greater than that authorized.

It was difficult to accurately evaluate or to determine the degree of increased hospital efficiency since revision under the provisions of SR 40-610-5. The physical layout of the plant was not conducive to

any particular centralization of activities. In order to obtain maximum benefits, as anticipated by the reorganization, it was believe that areas of administrative operations should be as concentrated as was physically possible. There were no particular difficulties encountered in the transition to the new organization; the most obvious adjustments required were concerned with the deletions of the special authority which was granted by the Surgeon General to establish a separate Orthopedic Service. This was a great help, since it prevented the overburdening of the Surgical Service with the care and administration of 70 percent of the patient load. In general, the Surgical, Orthopedic and Medical Services operated at about the same level in number of patients and volume of work during the year.

After the close of the Korean War, the hospital remained the major medical installation in Third Army area. Most of the medical and surgical specialties were available. Because of this and the excessive costs of maintaining the cantonment buildings, the planners devoted more and more time toward establishing a new hospital plant.

On 11 September 1956, the hospital was fully accredited by the Joint Commission on Hospital Accreditation. Considering that the operation was in cantonment buildings which were at least 15 years old and in permanent buildings at least 28 years old, this was a great accomplishment. The hospital has remained accredited since the original evaluation.

MARTIN ARMY HOSPITAL

Another plateau in the constant development and expansion of the hospital was reached in July 1955 when ground was broken for the construction of a standard 500-bed hospital. The site selected for construction was Houston Hill about four miles from the Main Post. Lieutenant Colonel Samuel C. Allison was the Medical Project Officer. He retired from the service prior to the completion of the construction, but he was retained on the job as a civilian employee. Many modifications were made in the original plans to incorporate the very latest medical equipment into the plant. Since the Fort Benning hospital was the third Class I hospital to be started under the same plan, many of the same modifications had already been approved at the other sites. This materially helped the construction.

The policy had already been established to name the new hospitals in honor of deceased officers of the Army Medical Service whose contributions to the service were of a distinct character. AR 40-600 contained the details. The names considered at Fort Benning were: Brigadier General William R. Dear, MC, who had commanded the Fort Benning Hospital from 1938 to 1940; Colonel James W. Duckworth, MC, who was Chief of OB-Gyn at Fort Benning from 1936 to 1938. He was also in the Bataan Death March; Major General Joseph I. Martin, MC, and Major General Leonard Wood, who helped organize the "Rough Riders" and was awarded

the Congressional Medal of Honor for his service against Geronimo in the Apache Wars.

The name selected was Martin Army Hospital. General Martin had graduated from the Infantry School Advanced Course in 1928. He was closely associated with the field medical service which supports the infantry during most of his career.

In the spring of 1958, construction of the new hospital was completed. Painting had been completed and all the equipment furnished by the contractor installed to include all type fixtures. Elevators, heating and air-conditioning units were completed, streets and parking lots completed and initial basic landscaping finished. The hospital, one of several new hospitals being constructed throughout the Army, is a 500-bed hospital on a 1,000 bed chassis. The ground had been broken for construction on 15 July 1955, and the completed building accepted by the Government from the contractors on 8 April 1958. The final cost of construction was \$6,380,891.

The style of architecture is contemporary. It is constructed of concrete and reinforced steel. The outside surface is waterproofed but not painted. The building is 163 feet high measured from the ground level. Concrete building blocks were used for all fill-ins for the outside walls. The exterior window frames are made from treated pine and the window panes are double for insulating purposes.

B-47

The building has five wings that are, in fact, five separate buildings joined together. They are designated "A", "B", "C", "D", and "E" wings. The "C" wing is the main stem of the building. It houses the elevator hoistways, service shaft, and elevator machine rooms. The 40,000 gallon water tank is on the 10th floor of this wing.

The floors are of asphalt tile in the wards, clinics, corridors, and administrative areas. Bath and utility floors are of ceramic tile. Floors in the kitchen areas are of Quarry (non-skid) tile. In the operating pavilion area and obstetrical delivery area, the floors consist of ceramic tile (staticproof).

Approximately 75 percent of the ceiling within the hospital consists of accoustical tile. The specialty clinics and emergency room do not have accoustical tile. The gross working area, including walls and partitions, is 318,429 square feet.

The normal bed capacity is 500, however, it can be expanded to 1000 beds by construction of two additional 250 bed wings. Supporting services such as X-Ray, Laboratory, Central Materiel, Surgery, Pharmacy, Food Service Division, and Administrative Areas are supposed to be adequate to accommodate the expansion to 1000 beds. However, this is only true of the following: Surgery, Central Materiel, Food Service Division, and the Administrative Areas.

The X-Ray Clinic is barely adequate for 500 beds and the Laboratory Service and Pharmacy are very cramped for space at the present time. To alleviate the crowded conditions in the Pharmacy, three storage areas

were allotted elsewhere in the hospital and every possible space is utilized in the Pharmacy proper by providing additional shelving and keeping slow moving items in these storerooms. The Laboratory was given storage space elsewhere and considerable adjustment of space utilization has been necessary. Any expansion of the hospital will necessitate a sub-laboratory section somewhere in the new addition.

There are parking facilities for 803 vehicles.

The water and electric supply system are tied in to the Main Post system with Kelly Hill as an alternate. Should both systems fail, the 40,000 gallon water tank on top of the roof will last for three days if rationed, and emergency power can be secured from the 175 KW generator. The 40,000 water tank weighs 160 tons.

The heating system is basically operated on natural gas. Should a gas shortage occur, there is available three 9,000 gallon underground tanks of fuel oil in reserve which will last approximately three weeks.

There are four self-operated passenger elevators and one service elevator. The elevators were installed by the General Electric Company at a cost of \$267,739.

A pneumatic tube system is installed for carrying messages, correspondence, and items of a similar nature between the various activities of the hospital. Briefly, the system is composed of 43

tube lines which carry transitube carriers between a like number of tube stations. The carrier travels at 25 feet per second and operates by sensitivity to an electric eye. By setting a combination of numbers, material can be sent directly to any one of the stations. There are five miles of tubing within the system.

A doctor's silent numerical paging system is installed at 45 locations throughout the hospital. When this audio paging system has been in full operation for one month, experience showed that less than fifty percent of persons paged actually saw and answered their call. For the small percentage of successful pagings, it is necessary to flash the numbers for long periods and the small success obtained is usually the result of some nurse or ward attendant remembering the doctors number and then contacting him and telling him that he is being paged. As the doctors became more familiar with the paging system, a great percentage of successful paging was noted.

During 1958, improvement and renovations were held to a minimum in view of the move to the Martin Army Hospital. Some of the improvements made to the Post Surgeon Activities were as follows:

- a. The old hospital headquarters building was renovated and painted during July, August, and September.
- b. The Deputy Post Surgeon, Preventive Medicine Division, Physical Examining Branch and Physical Evaluation Board were moved from the cantonment type buildings to the old hospital headquarters building in October.

c. In May, the heating system in the old hospital headquarters building was converted from coal burners to gas with thermostatic control.

d. Dispensary "D" was painted.

As noted above, the completed Martin Army Hospital did not contain sufficient space for all of the activities of the surgeon. Many of the cantonment buildings were still required. This fluctuation between approved plans and current needs also existed in 1925 when the first permanent hospital building was opened. In addition to the activities already mentioned, space outside of the new hospital was required for nurses quarters, male bachelor quarters, enlisted detachment and Medical Holding Detachment barracks, medical storage, utilities and a mess hall. The initial requirement was for 223,787 square feet which included 54,108 square feet for standby wards, buildings 322, 323, and 324.

By the end of 1959, Martin Army Hospital had functioned for 18 months. The staff had the opportunity to observe the relative adequacies and inadequacies of the design, construction and equipment. The comments of each activity are recorded in Annex I of the 1959 Army Medical Service Activities Report of Fort Benning. Because these comments are extensive, they will not be duplicated here.

Construction of new nurses' quarters, apartment type, commenced on

23 July 1960. The new quarters will accommodate 80 officers (20 field grade and 60 company grade). Estimated completion date was set as 18 July 1961, however, the prime contractor, Jordan Company of Columbus, Georgia, predicted completion of the structures by 1 May 1961. Construction progressed rapidly due to favorable weather conditions. The Army Engineer, Savannah District was responsible for overall supervision of the project. The accepted bid was \$689,494.

Construction of the new nurses' quarters was completed in May 1961. Furnishings for the quarters were supplied by the Post Quartermaster as initial issue after DCSLOG had disapproved procurement of non-standard items. Disapproval of non-standard furnishings delayed occupancy until July 1961.

The roof of Martin Army Hospital was repaired to eliminate numerous leaks which occurred during heavy rainfalls. This project cost \$50,000.

Building 323, in the old hospital area was renovated. This included painting, installation of fluorescent lights, venetian blinds, and adequate partitions to block two stairways leading to the second floor area. The central air-conditioning system was made serviceable. On completion of these renovations, the Well Baby and Immunization Clinics were moved into the area which gave these clinics space to operate efficiently.

The year 1963 was characterized by a general increase in the workload of all the activities of Martin Army Hospital. The total patients admitted increased to 14,400 from 13,054 in 1962. The outpatient visits were 500,178 compared to 447,952 in 1962. The increases in some of the

specialty clinics were General Surgery, 20.3%; Orthopedic, 74%; Gynecology, 52.7%. The average inpatient census only increased to 398 from 390. The reason for the increased workload was the increase in the post military strength by almost 10,000 troops. The activation and buildup of the 11th Air Assault Division caused this increase in troops. A 22% increase in the post military strength increased the outpatient visits 11% and the inpatient census only 2%.

The general overcrowding of the outpatient facilities cannot be attributed wholly to the increase in post strength in 1963. An analysis of the vital statistics since 1958 establishes the trend toward more outpatient care. The method of treatment of certain diseases also made it possible to treat more conditions on an outpatient basis.

Because of the trend toward increased outpatient services, plans were prepared and submitted through medical channels to The Surgeon General for a clinic addition to Martin Army Hospital. Both The Surgeon General and the Third Army Surgeon recognize the need for expanded outpatient facilities. The Surgeon General recommended that this project be included in the installation plans and programs for further study. On 29 January 1964, the project with the indorsements of The Surgeon General and the Third Army Surgeon was forwarded to the Post Planning Board. The initial plan calls for the construction of a 55,000 square foot addition to Martin Army Hospital and alteration of 35,000 square feet in the existing clinic area.

A project for the building of Hospital Detachment Billets in the immediate vicinity of Martin Army Hospital is on the list of Installation Military Construction Appropriation for Fiscal Year 1965.

Another project to expand one of the permanent warehouses by 43,000 square feet for medical supply storage is priority 58 on the list of long range projects proposed by the Installation Planning Board.

The need for increased clinic facilities, detachment billets and medical supply storage were recognized even before Martin Army Hospital was opened. These needs and the addition of a 250-bed wing to the building were enumerated in a letter from Major General Herbert B. Powell, then the Fort Benning Commander, to Lieutenant General William S. Lawton, Comptroller of the Army in 1958.

A continual buildup of the 11th Air Assault Division in 1964 increased the hospital workload. Through March, the average inpatient census was 414. For a short period in January and early February, it was necessary to house minimal care patients in building 323 of the Hospital Annex. It was fortunate that the expected influx of patients with upper respiratory diseases did not materialize. The largest number of patients occupying beds was reached on 22 January 1964. The census that day was 464. Six years after the completion of Martin Army Hospital, space in the old hospital area is required to house The Preventive Medicine Division, Pharmacy Manufacturing, Optometry Section,

Physical Examination Section, Outpatient Administrative Offices, Dispensary Supply, and the Offices of the Army Health Nurse. Standby ward space is also maintained in this area.

During the latter part of October 1965, the Property Management Office provided the necessary equipment to equip a 250-bed ward in a permanent barracks in anticipation of a winter outbreak of upper respiratory diseases among trainees of the United States Army Infantry Center. All resources were pooled and wards were completed and ready for occupancy by the latter part of November.

The hospital's authorized bed capacity increased from 500 to 930 during the year of 1966. An urgent minor construction project was submitted for renovation of the old hospital, Building 396, to permit movement and consolidation of the General Outpatient Services and the Pediatric Clinic. This would permit the general outpatient area in the main hospital to revert to much needed bed space as originally designed.

The hospital's authorized bed capacity was 900 for 1967, but the census had gone as high as 1,225.

In 1967, the Nursing Service relocated on "A" Wing of 4th floor which provided centralized administration and training, both resulting in improved coordination within Nursing Service and reduce duplication of functions.

During the report period, the Acute Respiratory Disease, ARD (changed from URI) admission rate among Basic Combat Trainees was extremely high,

necessitating the opening of extra wards in the Kelley Hill Annex of Martin Army Hospital between January and May. Forty-one cases of meningococcal disease was treated at Martin Army Hospital; ten of these were admitted in the month of March. In the respiratory disease season which began in October, there were far fewer cases of meningitis that had been experienced during the early months of the last season, reflecting variation, better weather, a more vigorous preventive medicine program or all three factors.

Building 396, over two miles from Martin Army Hospital, was renovated to serve Fort Benning as a central outpatient care complex. The Outpatient Clinic, Pediatric Clinic, Central Appointment Service and the Outpatient Records were relocated from Martin Army Hospital to this building which once housed the main hospital. The incoming sections joined the Dermatology Clinic, Dependent Immunization Clinic, Well Baby Clinic, Mental Hygiene Consultation Service and Optometry Clinic which were occupying portions of the building. Two x-ray machines were installed in the basement and a pharmacy annex and laboratory were set up in adjacent buildings all connected by inclosed hallways. This completed the formation of a relatively self sufficient outpatient treatment facility to serve the more than 50,000 dependent and retired personnel in and around Fort Benning.

Building 323 was renovated at the same time as Building 396. This two-story building now houses the Physical Examination and Flight Physical

Examination Sections. It was joined to Building 396 by an inclosed hallway. Renovation and rearrangement resulted in a more efficient examination section.

Up through mid-year, internal hospital department moves continued to be made. The movement of the Outpatient and Pediatric Clinic, Central Appointments and Outpatient Records to the old hospital building left room for expansion within certain hospital departments. The consolidation of outpatient clinics in Building 396 had proven extremely successful. Patients were able to make an appointment the same day they called, or walk in and see a doctor with a minimum of delay. This success was due to both good management and the fact that the clinics were open until 2130 hours on weekdays and until noon on Saturdays.

The past ten years had seen a great workload change, but none like the over 205% increase in outpatient service. The original new hospital built in 1958 was designed to provide clinic space for inpatients only. This tremendous increase necessitated the movement of outpatient clinics to the old hospital area. The move required duplication of both personnel and equipment. The personnel shortage, both military and civilian, served to compound the problem. The Surgeon General saw fit to accelerate construction on a new 69,400 square foot outpatient clinic building addition to the hospital. Department of Defense approved the project early in the year and final drawings and costs were completed in December 1969 for presentation to Congress and the DOD in January 70 for FY71 funding.

The need to provide facilities to meet the increasing ambulatory care demands, Ambulatory Patient Clinic Wing was constructed at a cost of \$3.8 million. As a result, during the Fourth Quarter of CY 1975, the vast majority of hospital services were centrally located with only a few services continuing to be provided in an old World War II Hospital Annex some 1.5 miles from the hospital.

In order to support the modern medical equipment provided the staff and to insure compliance with the Joint Commission on Accreditation of Hospital standards, an extensive electromechanical renovation project was implemented in 1976. The renovation disrupted therapeutic, diagnostic and administrative services.

The project, now completed, primarily added the fire escape towers to the hospital while eliminating seventy-seven beds.

APPENDIX C

EXTRACT FROM MEDDAC REGULATION 15-1,
BOARDS, COMMISSIONS AND COMMITTEES
AND
EXTRACT FROM MEDDAC REGULATION 10-1,
MANUAL OF ORGANIZATIONS AND FUNCTIONS

ANNEX EE

PHYSICAL FACILITIES UTILIZATION AND LONG RANGE PLANNING COMMITTEE

PURPOSE/FUNCTIONS: To identify physical facility resources and recommend to the Commander ways of using those resources efficiently and effectively in view of continuing construction programs. To formulate intermediate (2-5 year frame), long-range (five year plus frame) goals and objectives of a broad nature, projecting major future requirements reference construction (new construction renovation, expansion, closure), manpower, equipment, and services, to conduct and analyze demographic studies, developing trend projections with respect to the population served and the potential impact of such trends on medical services rendered.

STANDING MEMBERSHIP:*

Chairperson - Logistics Division (Secretarial support, without vote, provided by secretary to Chief, Logistics Division).

Chief, Professional Services

Chief, Department of Primary Care and Community Medicine

Chief, Department of Nursing

Chief, Department of Medicine

Chief, Department of Surgery

Chief, Comptroller Division

Chief, Family Practice Department

Chief, Clinical Support Division

Automation Management Officer/Chief, Data Processing Activity

Health Facility Project Officer (if assigned)

Department of Facilities Engineering In-House Engineer

Adjutant

Chief, Personnel Division

Chief, Dental Activity

Chief, Veterinary Activity

Chief, Plans, Operations and Training Division

MEETS: Semiannually or more frequently at the call of the chairperson.

OFFICE OF RECORD FOR APPROVED MINUTES: Office of the Chairperson, Martin Army Community Hospital.

FORMAL DISTRIBUTION OF MINUTES: Submitted to Administrative Management Committee for review and Executive Committee for approval. One copy provided each member.

AUTHORITY: VOCO, MEDDAC Commander.

REFERENCES:

- a. AR 1-1.
- b. AR 40-4.
- c. AR 210-20.
- d. AR 215-35.
- e. Standards for the Accreditation of Hospitals, JCAH (Current Manual).

SPECIAL INSTRUCTIONS: None.

SUMMARY: Chairpersonship of this committee shifted to the Chief, Logistics Division. This committee made subordinate to Administrative Management Committee.

3-19. COMPTROLLER DIVISION

a. General. The mission of the Comptroller Division is to provide a variety of services pertaining to the programming, budgeting, accounting, review and analysis and internal review practices in the administration and overall management of the command. Also, to maintain the Command Table of Distribution and Allowances (TDA) IAW AR 310-49.

b. Functions of the Comptroller Division include:

(1) Serves as the commander's principal advisor on resource management matters and consultant on the overall management of the command.

(2) Development of the operating program for the division.

(3) Assistance to program coordinator and to the Program Budget Advisory Committee.

(4) Implementation of the Army Financial Management Improvement Program.

(5) Development and operation of appropriate training programs.

(6) Review and analysis of work methods and operational procedures within the division.

(7) Development and conduct of an annual Internal Review Program as approved by the commander.

(8) Establishment and monitoring of procedures to insure the administrative control of funds.

(9) Provision of program and budget services to the command.

(10) Monitor of accounting services provided by the installation.

(11) Review and analysis, to include preparation of command progress and statistical reports and the command analysis of objectives report.

(12) Staff assistance to the Medical Service Account on reimbursement vouchers and collections, accounting classifications and budget procedures.

(13) Certification and coordination of processing of payment vouchers for medical care obtained from civilian sources.

(14) Provision of systems analysis, space and layout survey and management systems design services for the command.

(15) Conduct of the DA Productivity Improvement Program (DAPP) IAW AR 5-4.

(16) Provision of the Management Systems Program.

(17) Conduct of the Management Information Control System with HSC Supplement 1 thereto.

(18) Conduct of the Commercial and Industrial Type Functions Program (CITF) IAW AR 235-5 with HSC Supplement 1 thereto.

(19) Establishment and accomplishment of an effective internal review program IAW AR 11-7.

(20) Conduct of audits for nonappropriated funds.

(21) Provision of audit liaison and audit compliance service IAW AR 11-7.

(22) Conduct studies pertaining to nursing as it impacts on facilities planning, personnel utilization, staffing and nursing methods both administrative and procedural.

(23) Coordination of method and management improvement activities within nursing.

(24) Assist operating personnel in the identification and solution of nursing problems, nursing methods and nursing procedures.

(25) Conduct studies on the effectiveness of and recommendations for equipment procurement and utilization.

(26) Conduct other studies relating to nursing as assigned.

(27) Serve as consultant to the hospital staff on nursing administrative methods, procedures and budget.

(28) Manpower management procedures IAW AR 570-4.

C-5

(29) Develop and maintain the command organization and functions manual.

(30) Serve as consultant to all elements of the command on matters pertaining to organization.

(31) TAADS document management.

(32) Conduct local studies to determine proper manpower utilization.

APPENDIX D

DYNAMIC HOMEOSTASIS
THE HOSPITAL IN MOTION

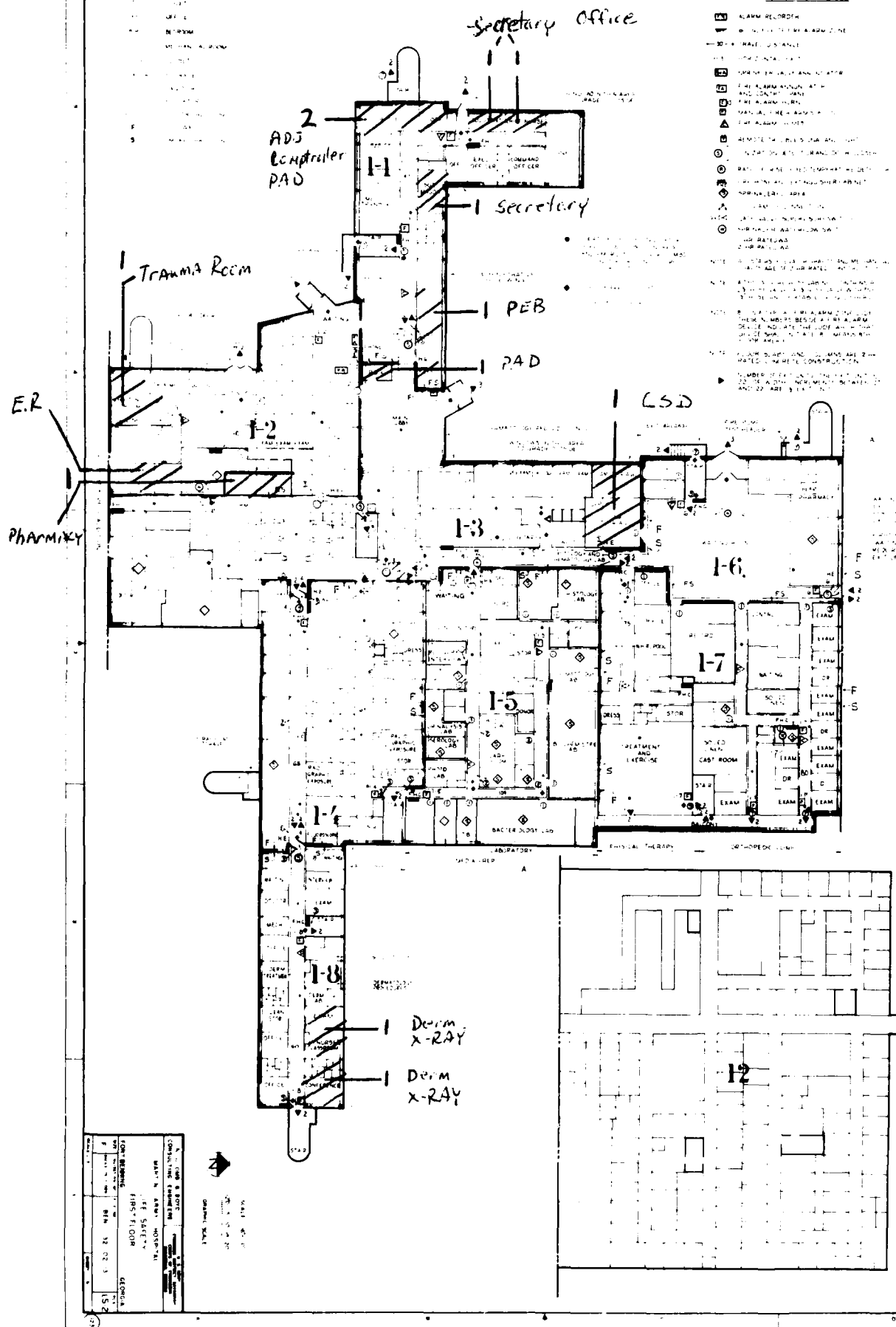


ABBREVIATIONS

- 1. OFFICE
- 2. NITROGEN
- 3. MEDICAL ROOM
- 4. WAITING
- 5. EXAMINATION
- 6. TREATMENT
- 7. LABORATORY
- 8. PHYSICAL THERAPY
- 9. CAST ROOM
- 10. DERM X-RAY
- 11. DERM X-RAY
- 12. DERM X-RAY

SYMBOLS AND NOTATION

- 1. ALARM REORDER
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- 99. ALARM REORDER
- 100. ALARM REORDER



USE OF AIR CONDITIONING TO
ASSIST IN SMOKE CONTROL

SMOKE CONTROL SYSTEMS: SMOKE DETECTOR
IN HALLWAYS AND IN RECEPTION AND STAIRWELL
SMOKE SUPPLY FANS, SMOKE AND FIRE
JAMBERS, 2 HOUR COMPARTMENT RATING
WITH THE ALARMED AREA

SMOKE CONTROL SYSTEMS: SMOKE DETECTOR
IN HALLWAYS AND IN RECEPTION AND STAIRWELL
SMOKE SUPPLY FANS, SMOKE AND FIRE
JAMBERS, 2 HOUR COMPARTMENT RATING
WITH THE ALARMED AREA

SMOKE PARTITION

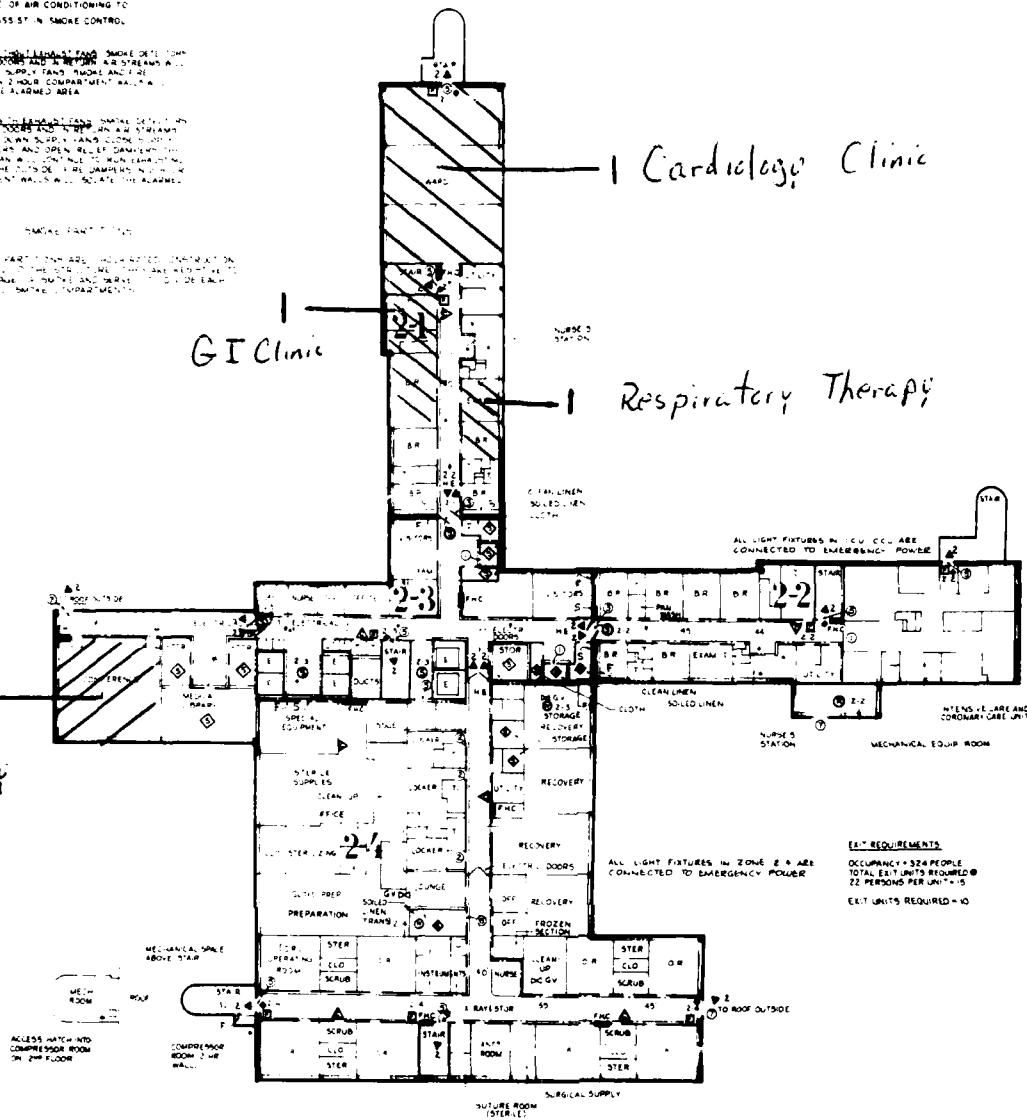
SMOKE PARTITION: SMOKE PARTITION
SMOKE PARTITION: SMOKE PARTITION
SMOKE PARTITION: SMOKE PARTITION

GI Clinic

Cardiology Clinic

Respiratory Therapy

Med
Library



SECOND FLOOR

FIRE ALARM SYSTEMS

FIRE ALARM SYSTEMS: SMOKE DETECTOR SYSTEM TO
SOUND CODED ALARM THROUGHOUT THE HOSPITAL
UPON OPERATION OF ANY AUTOMATIC OR MANUAL
FIRE ALARM DEVICE

MANUAL PULL STATION REQUIRE
A KEY TO RESET

AUTOMATIC HEAT DETECTORS OPERATE AT
A FIXED TEMPERATURE OF APPROXIMATELY
36°F OR UPON A TEMPERATURE RISE OF
5°F PER MINUTE OR GREATER

AUTOMATIC SMOKE DETECTORS EQUIPPED WITH
FRAME MOUNTED PHOTOGRAPHIC COMBINATION
DETECTORS. THESE DETECTORS CLOSE UPON
ACTIVATION OF THE DETECTOR. A SIGNAL FROM
THE FIRE ALARM SYSTEM TO BE MANUALLY
IN THE CORRECTION

SPRINKLER VALVE: 5 PERIOD
IN THE CORRECTION BOARD A TROUBLE
ALARM BY ZONE WHEN THE
VALVE POSITION IS ALTERED

SPRINKLER WATERFLOW INDICATORS: JAME
OR PRESSURE TAP SWITCH TO SOUND AN
ALARM IN A SUSTAINED WATER FLOW
(E.G. TO THE DISCHARGE OF ONE SPRINKLER)

SCHEDULE OF DOOR TYPES

1. SOLID CORE WOOD - 4" HBT LABEL
2. SOLID CORE WOOD - 4" HBT LABEL
3. SOLID CORE WOOD - 4" HBT LABEL SMOKE DETACTUATED
4. ALUMINUM RATED ROLL UP SHUTTER SMOKE DETACTUATED
5. HOLLOW METAL - 4" HBT LABEL
6. HOLLOW METAL - 4" HBT LABEL SMOKE DETACTUATED
7. HOLLOW METAL DOOR
8. PATIENT ROOM DOORS AND DOORS UNDERGATED
AIR IN SOLID CORE WOOD
9. DOORS IN DETENTION AREAS HAVE TAMPER
PROOF HARDWARE

NOTE

ALL DOORS NOT SPECIFICALLY NOTED
OTHERWISE ARE SOLID CORE WOOD
WITH CONSTRUCTION GIVING A FIRE
RATING EQUIVALENT TO 1" LABEL
(20 MINUTES)

ELEVATORS

ALL ELEVATORS HAVE SERVICE
CONNECTED TO EMERGENCY POWER
ONE PASSENGER ELEVATOR AND ONE
FREIGHT ELEVATOR MAY BE OPERATED
MANUALLY ON EMERGENCY POWER

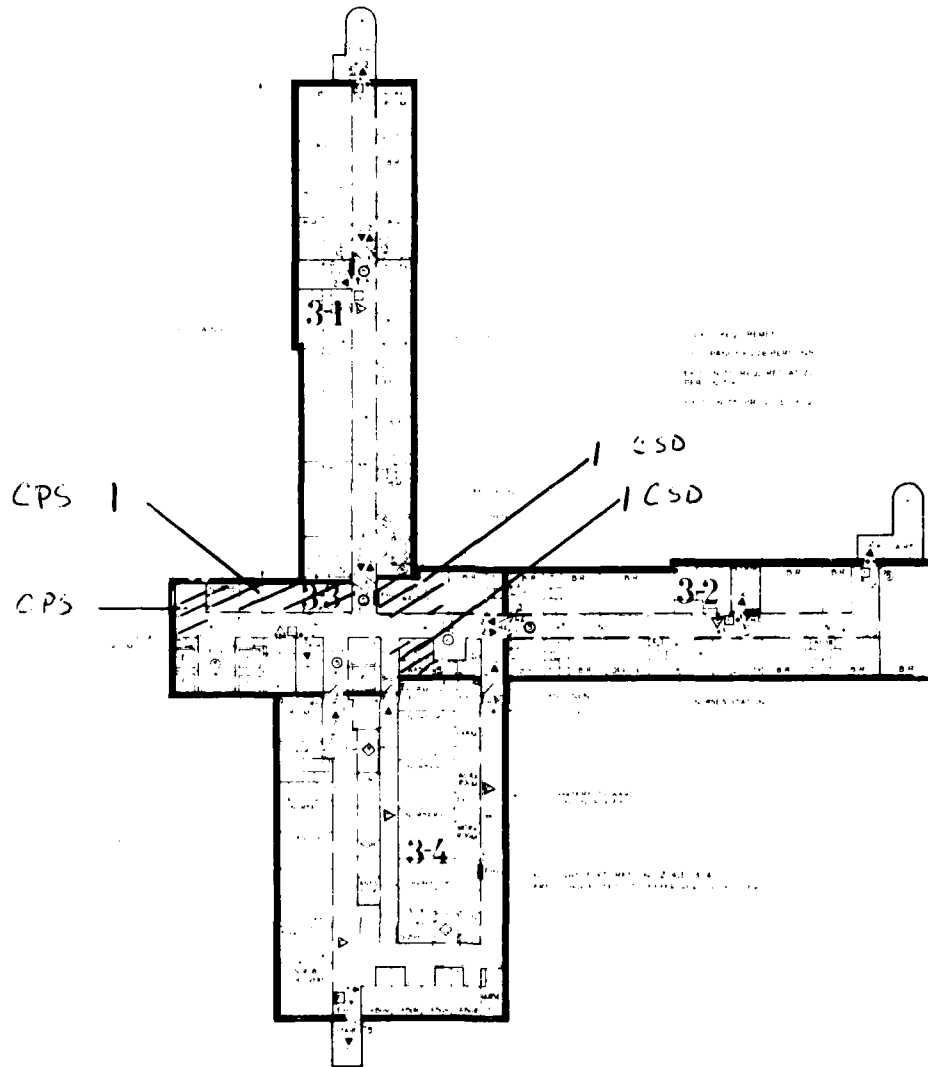
A REMAIN KEY TO OVER RIDE
AUTOMATIC CONTROLS IS LOCATED
IN EACH ELEVATOR

ACTIVATION OF A SMOKE DETECTOR IN AN
ELEVATOR LOBBY WILL CAUSE ALL ELEVATORS
SERVING THAT LOBBY TO RETURN NON STOP
TO THE FIRST FLOOR OPEN AND SHUT OFF

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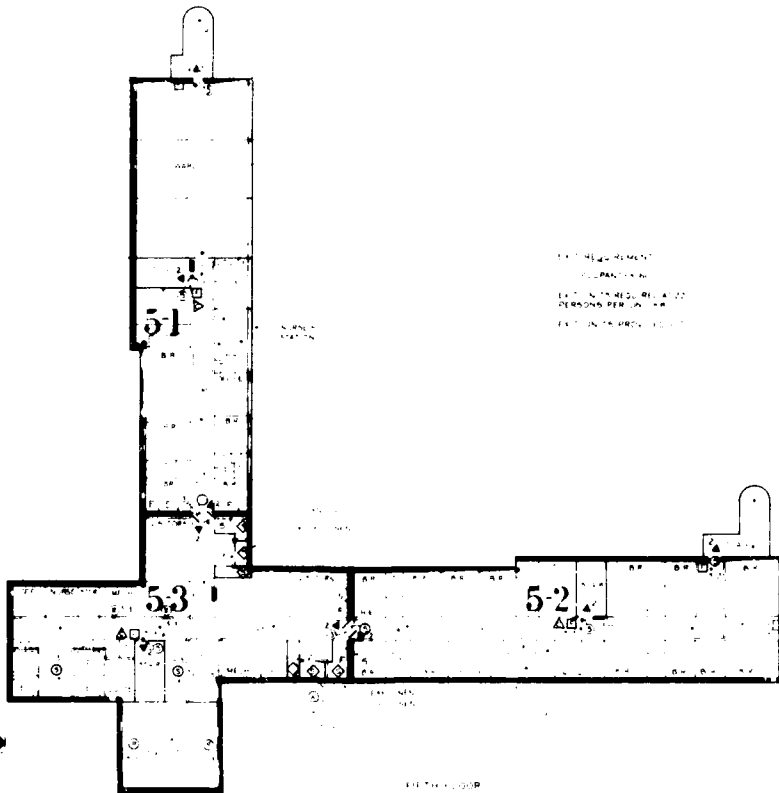
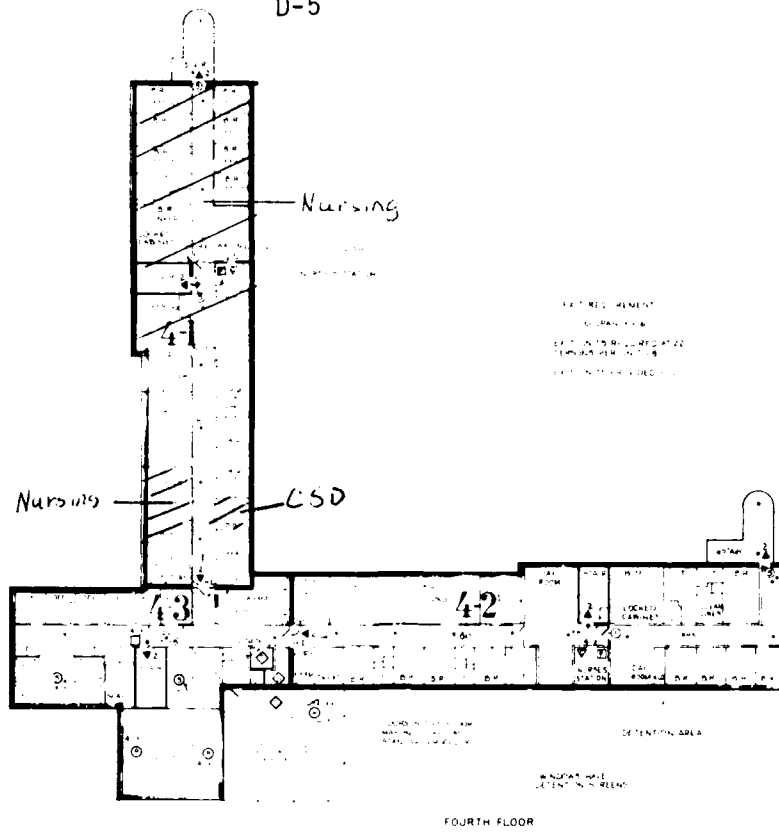
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U.S. ARMY



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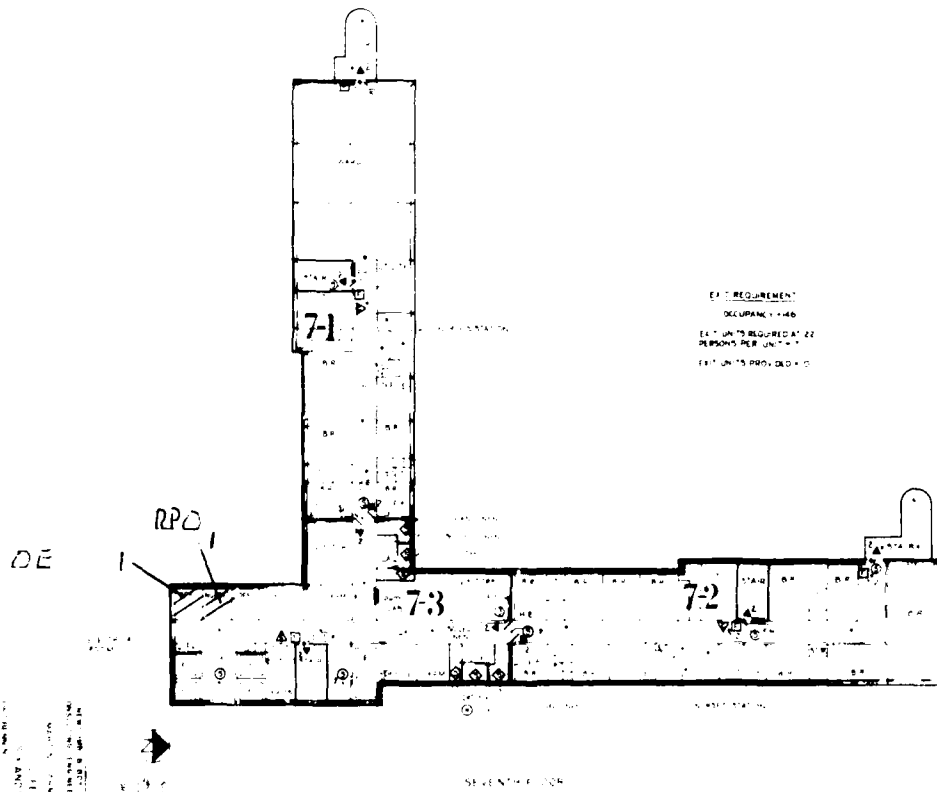
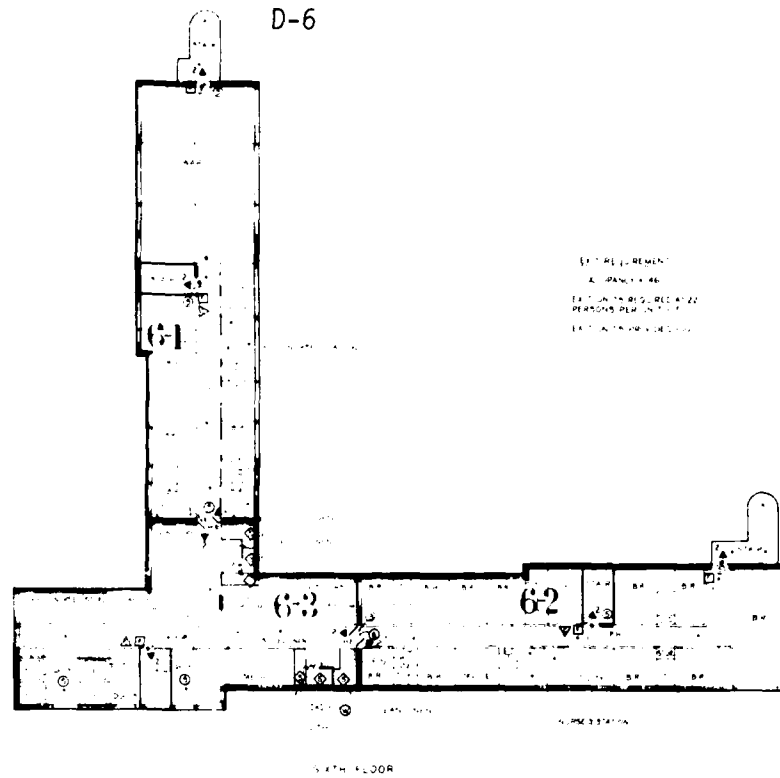
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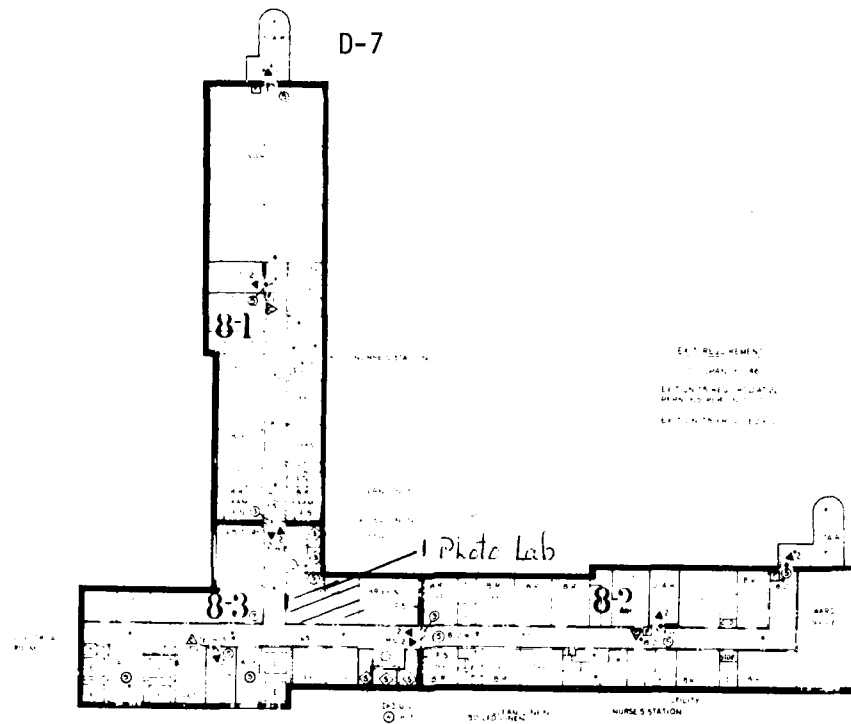
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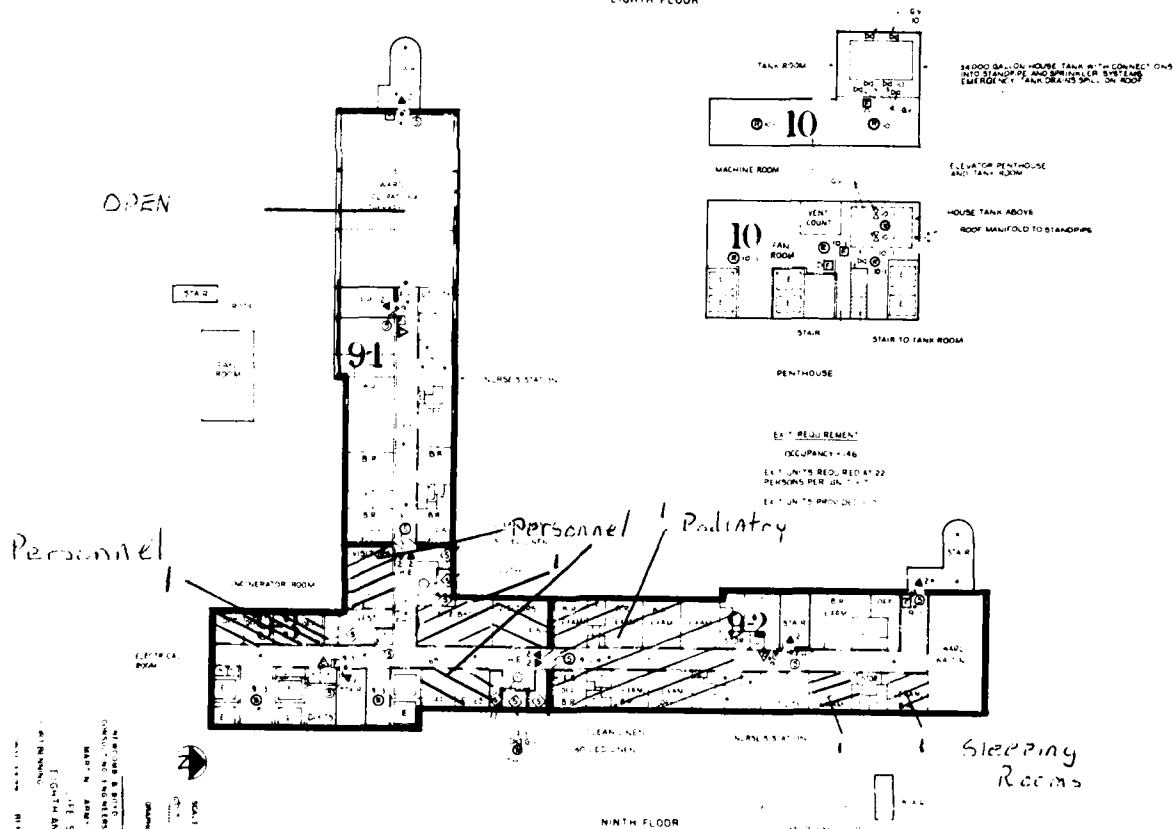
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EIGHTH FLOOR



NOTES:
1. SEE SAFETY
EIGHTH AND NINTH FLOORS
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EIGHTH AND NINTH FLOORS
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APPENDIX E

LONG RANGE PLANNING
THE SOLE DOCUMENTS

CONSTRUCTION PROJECTS

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
1. Main lobby renovation.		
2. Administration Building.		
3. Remodeling floors for brighter appearance.		
4. Renovation of Admissions and Disposition.		
5. Renovation of the Emergency Room waiting area to include family counseling room.		
6. Renovation of storage building adjacent to Emergency Room to house EMSS.		
7. Remodeling Labor and Delivery.		
8. Redesign of nursing stations.		
9. Remodeling patient rooms to include bathrooms in every room.		
10. Redesign patient bed locations to insure beds are not located behind the doors.		
11. Remodeling of ventilation system for the Pharmacy.		
12. Establishment of emergency power in the Pharmacy basement and the sixth floor Pharmacy area.		
13. Renovation of Food Service to include passageway between main hospital basement and clinic wing basement.		
14. Renovation of old officer dining area.		
15. Remodeling of main dining room.		
16. Renovation of the main conference room in the basement/establishment of a hospital auditorium complex.		
17. Relocation of helipad.		
18. Establish a cover over the Emergency Room vehicle ramp.		

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
19. Establish a cover over the oxygen storage area.		
20. Installation of folding walls in the main dining room.		
21. Renovation of DC #2 for possible utilization as a consolidated TMC or Family Practice Clinic.	Short Term	
22. Renovation of the chapel.		
23. Establishment of air curtains for all exterior doors.		
24. Remodeling of Pediatric Ward to include a parent area.		
25. Redesign of staff and patient parking areas.		
26. Emergency Room renovation/family counseling room.	Short Term	
27. Redesign and increase square footage in the Department of Radiology for storage of files and housing of newly acquired equipment.		
28. Renovation of the Outpatient Clinic.		
29. Establishment of a reception station.		
30. Establishment of a centralized TMC, Podiatry Clinic, PES, at Sand Hill to support the OSUT training.		
31. Procurement and installation of a new incinerator.		
32. Electronic/mechanical gates for parking lot control.		
33. Renovation of the physical environment in Pathology.		
34. Renovation of the basement.		
35. Renovation of the psychiatric recreation area.	Short Term	
36. Establishment of a bank in the hospital.	Short Term	
37. Exterior landscaping.	Short Term	

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
38. Establishment of a PX complex to include florist, beauty shop, gift shop, etc.		
39. Swimming pool for Physical Therapy.		
40. Conversion of patient bays into private rooms.		
41. Staff locker facilities.		
42. Renovation/utilization of old hospital area.		
43. Outdoor lounge area behind the chapel.	Short Term	
44. Picnic area.	Short Term	

STUDIES

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
1. Impact of hospital-based computer study.	Long Term	
2. Quality assurance study.	Short Term	
3. Study to make Fort Benning a Family Practice post.	Long Term	
4. Demand manpower survey.	Short Term	
5. Study to increase religious services.	Short Term	
6. Study to determine physical security requirements to include alarm system on stairwell doors, external TV monitoring and visitor control.	Short Term	
7. Study to determine psychiatric ward expansion requirements.	Short Term	
8. Study to determine the best utilization of DC #2.	Short Term	
9. Study to review hospital transportation needs.	Short Term	
10. Study to review hospital directory needs for internal routing.	Intermediate	
11. Study to review manning of hospital committees.	Short Term	
12. Study to establish and improve hospital relations with community hospitals.	Short Term	
13. Study to determine need for elevator renovation.	Short Term	
14. Laboratory slip study.	Short Term	
15. Study to devise a system for dictation of outpatient records to insure they are auditable.	Short Term	
16. Study to create a staff lounge.	Short Term	
17. Study to determine a need for night meals for staff.	Short Term	
18. Study to determine need for expansion of Outpatient Clinic hours.	Short Term	

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
19. Study to review committees for acting as patient advocates.	Short Term	
20. Study to review the mission and functions of Occupational Therapy.	Short Term	
21. Study to determine the use of federal buildings as locations for extended services.	Long Term	
22. Study to determine durable equipment needs.	Short Term	
23. Study to determine utilization of reserve medical units.	Short Term	
24. Study to determine if reception area in centralized TMC can be collocated in the Sand Hill area.	Short Term	
25. Study to improve hospital pride and esprit (concerned care program).	Short Term	
26. Study to determine utilization and space for following areas:		
Location of enlisted barracks closer to the hospital.	Short Term	
Additional area for reenlistment counselor.	Short Term	
Brown bag area for employees of the hospital.	Short Term	
Staff lounge	Short Term	
Collocation of TMC Services Branch and Department of Primary Care and Community Medicine	Short Term	
Medical Hold Area.	Short Term	
Better Patient Affairs Liaison Office.	Short Term	
27. Study to determine emergency power needs for the clinic wing.	Short Term	

E-6

ODDS AND ENDS

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
1. Assignment of MP's to hospital 24 hours a day.	Short Term	
2. Improve communications with Dahlonga and Eglin Medical facilities.	Short Term	
3. Request change in gas station hours to non- duty time.	Short Term	
4. Journal Club.		

EQUIPMENT ACQUISITION

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
1. Purchase of 110 TV's.	Short Term	
2. Purchase of furniture to refurbish office areas.	Intermediate	
3. Purchase of equipment to update dayrooms.	Intermediate	
4. Purchase of white uniforms for staff.	Short Term	
5. Procurement of patient transport vehicles.	Intermediate	
6. Procurement of new carts.	Intermediate	
7. Establish AFEES theater.	Short Term	

WORK ORDER PROJECTS

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
1. Widening of handicapped parking spaces.	Short Term	
2. Relocation of vending machines in the Emergency Room.	Short Term	
3. Make thermostats operational.	Long Term	
4. Reserve parking for Emergency Room patients.	Short Term	
5. New Emergency Room sign by the road.	Short Term	
6. Internal communications/pneumatic tube system.	Short Term	
7. Physical security in the Operating Room.	Short Term	
8. Establishment of an amnesty box.	Short Term	
9. Parking.	Short Term	

SYSTEMS

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPONSIBLE DEPART- MENT/DIVISION</u>
1. Nutrition advisor handout booklet.	Short Term	
2. Establishment of standard hospital diet plan.	Intermediate	
3. Update of MEDDAC briefing film.	Short Term	
4. Establishment of a patient educational program for television.	Intermediate	
5. Establishment of a community education program for CPR, etc., (KEEP WELL Programs)	Short Term	
6. Audio page and music system.	Short Term	
7. Physician and nurse post orientation system.	Short Term	
8. Improve employee orientation in-house.	Short Term	
9. Review the MAST system.	Intermediate	
10. Establish a visitor control system.	Intermediate	
11. Improve telephone system.	Long Term	
12. New food cart system.	Intermediate	
13. Patient library mobile cart system seven days a week.	Short Term	
14. Cardiac rehabilitation program.	Intermediate	
15. Twenty-four hour outpatient records room.	Intermediate	
16. Establish a Civilian Personnel Office in-house.	Short Term	
17. Establish a Contracting and Procurement Office in-house.	Short Term	
18. Establish a Post Engineer Office in-house.	Short Term	
19. Improve participation in command programs in-house.	Short Term	
20. Patient escort system.	Short Term	
21. Linen control system.	Short Term	

<u>SUBJECT</u>	<u>TIME FRAME</u>	<u>RESPNSIBLE DEPART- MENT/DIVISION</u>
22. VA counselor in-house.	Short Term	
23. Expansion of ward clerks to two shifts.	Intermediate	
24. Expand hand receipt requirements for durable goods.	Short Term	
25. Update inpatient information booklet.	Short Term	

APPENDIX F
COMMITTEE DYNAMICS

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MEDICAL DEPARTMENT ACTIVITY
FORT BENNING, GEORGIA 31705

ATZB-MM-S

15 October 1980

MINUTES PHYSICAL FACILITIES UTILIZATION AND LONG RANGE PLANNING REVIEW COMMITTEE

1. The Physical Facilities Utilization and Long Range Planning Review Committee met in the Headquarters Conference Room at 1330 hours on 15 October 1980 with COL L. K. Vann presiding.

2. Attendees were:

COL L. K. Vann, MSC (Chairman)	Executive Officer
COL Nicholas Khoury, MD	Chief, DPCCM
COL Teryl Miller, ANC	C, Dept of Nursing
COL Melvin Butler, MC	C, Professional Services
LTC(P) Hinson Paul, MSC	Chief, Logistics Division
LTC(P) William Sims, VC	Chief, Vet Activity
LTC Joseph Blatnica, MSC	Chief, Comptroller
MAJ Edward Foresberg, MC	Chief, Family Practice Resident Service
MAJ Richard Helmbold, MSC	Chief, Clinical Support Division
CPT James Hazelriggs, MSC	Chief, Ambulatory Care Support Branch
CPT Donald Bruss, MSC	Administrative Resident
CPT John Larson, MC	Family Practice Resident
CPT Elsie Norris, MC	Chief, Allergy Clinic
1LT Gregory Mulligan	Automation Management Officer
SFC Ronald Mahoney, for	Chief, Personnel Division

3. COL Vann stated the purpose of the meeting, which is problem identification, and decision making. Problems have surfaced with respect as to how the space in the hospital building will be used in a future time frame spanning from immediate to five years. Essentially, the committee must identify space requirements for the hospital building with regards to beds, clinics, and support services provided in these areas. The goal for this committee is to develop a plan for physical plant utilization.

4. The hospital is located in a 1950 building that is housing 1980 technology. We have shifted from the acute patient care to the ambulatory mode. There has been a huge expense of administrative requirements, i.e., the incoming computer. The electrical/mechanical upgrade resulted in a huge loss of beds, which remarkably decreased the hospital's ability to function as an inpatient facility.

5. There is a long history of short term solutions to the space utilization problem. The goal of this committee is to avoid ad hoc solutions, coming up with long term plans. A list of all the identified problem areas as discussed in this meeting is attached at Enclosure 1. The group was asked to take this list, prioritize the items, each person sees the priority and return to CPT Bruss before the next meeting. It was suggested that the entire committee should not be needed to develop the alternatives. LTC Blatnica suggested that each one should look at what he or she needs as well as what can be given up. According to Health Services Command, this hospital does not meet the operating bed capacity as it is listed.

AFEB-MAN-S

Minutes Physical Facilities Utilization and Long Range Planning Review Committee

6. Dr. Khoury asked if other hospitals were experiencing the same space problems. When assured that they were, he suggested that we check to see how other hospitals have handled these or similar problems. CPT Bruss said that he has talked with personnel at Walter Reed, Fort Bragg, Fort Ord, Fort Carson, and Fort Knox to determine exactly that.

7. The subject of Building 66 was discussed and it was determined that MEDDAC either use that building or lose it. Family Practice will probably not be able to utilize it, but MEDDAC can use it for other things.

8. CPT Morris, the new allergist, questioned when it would be possible for the committee to make the decisions which would make her clinic operational. After much discussion, it was revealed that allergy would become temporarily located the the EENT Clinic.

9. CPT Bruss stated that his goal at this hospital is to put together a "white paper" which will state our immediate, one, three, and five year problems at Martin Army Hospital. His position is that of a "clearing house" for all space utilization problems and solutions.


10. COL Vann summarized what is expected of the committee and an agreement was reached to meet again on Wednesday, 22 October 1980, at 1500 hours in the Headquarters Conference Room. CPT Bruss asked that all the prioritized lists be returned to him NLT Monday afternoon (20 Oct) or Tuesday morning (21 Oct).

11. The meeting was adjourned at 1425 hours.


L. K. VANN
COL, MSC
Chairman

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGCEN.

REFERENCE OR OFFICE SYMBOL ATZB-MAH-S	SUBJECT Physical Facilities Utilization and Long Range Planning Committee
TO SEE DISTRIBUTION	FROM Executive Officer DATE 15 Oct 80 /bwg/544-2268 CMT 1
<p>1. Attached at Incl 1 is a list of identified problem areas which were discussed at today's committee meeting. Please prioritize these items numerically in each individual column according to your own perception of problem areas.</p> <p>2. Please return your completed list to CPT Bruss NLT COB 20 Oct 80.</p> <p>3. The next meeting of this committee is scheduled for 1330 hours 22 Oct 80 in the Headquarters Conference Room.</p>	
1 Incl as	 L. K. VANN COL, MSC Executive Officer
DISTRIBUTION: LTC(P) Paul LTC Blatnica LTC(P) Sims COL Khoury COL Miller COL Butler MAJ Forsberg MAJ Helmbold CPT Larson ✓ CPT Bruss CPT Hazelriggs CPT Morris MAJ Elliott 1LT Mulligan	

IDENTIFIED PROBLEM AREAS (INTERNAL)

IMMEDIATE:

12 MONTHS

36 MONTHS

60 MONTHS

1. Allergy/Immunization Clinic	1. Receipt of Radiology Equipment, including computer terminal/Dermatology Clinic	1. Rear of kitchen, food service	1. State of the Art-Equipment support
2. OR Storage on A2	2. Staff sleeping rooms & lounge area	2. Logistics, SAILS conversion	2. Video studio
3. PO&T	3. Well Baby Clinic	3. ENT-ER Sleeping area	3. Further shift to "ambulatory" model
4. Podiatry Clinic	4. Paper storage for computer	4. Radiology file space area	
5. ARD Season	5. Automation Management offices	5. EKG file space area	
6. Red Cross	6. Radiology	6. OT/PT Requirements	
	7. Personnel on 9th Floor	7. GI Clinic, A-2, permanent facility	
	8. Central Automated appointments	8. Front lobby refurbishment	
	9. Bldg 66 (D.C. #2)	9. A&D refurbishment	
		10. Barracks, space & location	
		11. Word processing	

Please numerically prioritize in each column individually. Return to CPT Bruss not later than 20 Oct 80.



DEPARTMENT OF THE ARMY
HEADQUARTERS MARTIN ARMY HOSPITAL
FORT BENNING, GEORGIA 31905

ATZB-MAH-S

22 October 1980

MINUTES PHYSICAL FACILITIES UTILIZATION AND LONG RANGE PLANNING REVIEW COMMITTEE

1. The Physical Facilities Utilization and Long Range Planning Review Committee met in the Headquarters Conference Room at 1500 hours on 22 October 1980 with COL L. K. Vann presiding.

2. Attendees were:

COL L. K. Vann, MSC (Chairman)	Executive Officer
COL Nicholas Khoury, MC	Chief, DPCCM
LTC(P) Hinton G. Paul, MSC	Chief, Logistics Division
LTC Joseph Blatnica, MSC	Chief, Comptroller Division
LTC John Moore, MSC	Chief, Occupational Therapy
LTC George Manning, MC	Chief, Dept of Family Practice
MAJ Howard Elliott, MSC	Chief, Personnel Division
MAJ Richard Helmbold, MSC	Chief, Clinical Support Division
CPT William Driggers, MSC	Chief, Plans, Operations, and Training Division
CPT James Hazelriggs, MSC	Chief, Ambulatory Care Support Branch
CPT Donald Bruss, MSC	Administrative Resident
1LT Michael Deets, MSC	Chief, Ancillary Support Branch
1LT Gregory Mulligan, MSC	Automation Management Officer

2. Copies of the priority list as determined independently by each attendee prior to the meeting were passed out and reviewed. Some additions to the list were noted, some changes were made, and the final priority list as approved by the committee is attached as Inclosure 1.

3. COL Vann appointed a prime task force to make a determination on each group of problems (i.e., Immediate, 12 months, 36 months, and 60 months). The task force will consist of the Chief of Professional Services (COL Butler), Chief Nurse (COL Miller), Executive Officer (COL Vann), and Chief of Logistics Division (LTC Paul). This nucleus group will be augmented by a representative from each area under consideration at that time.

4. The task force will report to the entire committee at its next meeting which is scheduled for 19 November 1980.

5. The meeting was adjourned at 1605 hours.

L. K. VANN
 COL, MSC
 Executive Officer

PRIORITY LISTIMMEDIATE

1. Allergy/Immunization Clinic
2. ARD Season
3. Podiatry Clinic
4. CMS Storage - A2
5. Red Cross

ADDED:

1. EMT sleeping/recreation room
2. Renovation of PES

12 MONTHS

1. Radiology Equipment/Impact on Dermatology
2. Building 66 (DC #2)
3. Radiology
4. Well Baby Clinic
5. Central Automated Appointments/OT
6. Staff Sleeping Rooms and Lounge Areas
7. Personnel on 9th Floor
8. Automation Management Officer
9. Paper Storage for Computer

ADDED:

1. Plans, Operations, and Training Division
2. Expand B-4 in patient capability

MOVED FROM 36 MONTHS TO 12 MONTHS

1. Logistics/SAILS Conversion
2. Word Processing

36 MONTHS

1. OT/PT Requirements
2. Barracks Space and Location
3. GI Clinic, A-2, Permanent Facility
4. EKG File Space Area
5. Radiology File Space Area
6. A&D Refurbishment
7. Front Lobby Refurbishment

ADDED:

1. Rear of Kitchen, Food Service Division
2. L&D and Newborn Nursery
3. Medical Clinic Expansion

60 MONTHS

1. State-of-the-Art Equipment Support
2. Further Shift to Ambulatory Care Model
3. Video Studio



DEPARTMENT OF THE ARMY
HEADQUARTERS MARTIN ARMY COMMUNITY HOSPITAL
FORT BENNING, GEORGIA 31905

ATZB-MA

19 November 1980

**REPORT TO THE PHYSICAL FACILITIES UTILIZATION AND LONG RANGE PLANNING REVIEW
COMMITTEE**

1. The Task Force met on 30 October, 6 November, and 13 November 1980 in the Headquarters Conference Room to discuss immediate and 12-month problem areas as listed on the priority list attached to the 22 October 1980 minutes and shown at Inclosure 1.
2. The following members were in attendance:
 - COL L. K. Vann - Chief, Administrative Services
 - COL Melvin Butler - Chief, Professional Services
 - COL Teryl R. Miller - Chief, Department of Nursing
 - LTC(P) Hinton G. Paul - Chief, Logistics Division
3. The first issue was the number of beds needed by Martin Army Community Hospital. Mobilization requirements are in excess of 600 beds and are contained in classified mobilization plans. Health Services Command has directed that we maintain 264 operating beds plus 17 bassinets. A study completed by LT Deets and concurred in by the Chief Nurse determined that we could currently set up 395 beds without displacing any of the existing functions. These beds would be set up in the present nursing areas as shown at Inclosure 2.
4. It was agreed by the Task Force that the capability of setting up 395 beds would adequately meet our peak workload requirements based on a reasonable estimate of the ARD season and other unforeseen contingencies. It was further agreed that there was no need to plan for any number of beds between the 395 and the 600-plus needed for mobilization.
5. The above determinations led to the conclusion that the second and third problems with immediate priority (ARD season and Podiatry Clinic) are no longer problems.
6. CMS Storage: Consideration will be given to moving CMS storage from A-2 to a temporary location at the kitchen on B-5 and then to B-2 when that space becomes available.
7. Red Cross: In order to free the dayroom on B-8, it was suggested that the Red Cross Office be moved from that dayroom to what is now the TV repair/communications room on C-8. This will necessitate refurbishment of the TV room.

ATZB-MA

19 November 1980

SUBJECT: REPORT TO THE PHYSICAL FACILITIES UTILIZATION AND LONG RANGE PLANNING COMMITTEE

LTC Paul will investigate possible new locations for the TV repair function.

8. EMT Sleeping/Recreation Room: Captain Hazelriggs is working with the Union and is developing a set of alternatives in order to improve the sleeping and living accommodations for the EMT's.

9. Staff Sleeping Rooms and Lounge Areas: A need was identified for three additional sleeping rooms (six beds) and a lounge area for the physician staff that must periodically stay overnight in the hospital. Since this involves primarily beds, it was determined that the inpatient nursing area on the end of B-9 could satisfy this requirement. The Podiatry Clinic may have to give up one room in addition to the "weight" room in order to fully satisfy this need. This will not interfere with inpatient bed capability.

10. Utilization of Building 66: LTC Paul will determine the square feet requirements of Preventive Medicine with the thought that Preventive Medicine would move to Building 66. If Preventive Medicine can move to Building 66, this will free some space for the Allergy/Immunization Clinic, the Dermatology Clinic, the Well-Baby Clinic and an expansion of the Community Mental Health Activity.

11. Expand B-4: It was determined that no requirement existed to expand B-4.

12. Personnel on 9th Floor: This does not interfere with the 395-bed capability plan and is therefore not a problem.



L. K. VANN
Colonel, MSC

DISPOSITION FORM F-9

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL

SUBJECT

ÄTZB-MACH-CSD

Bed Capabilities

TO Executive Officer, MACH

FROM Chief, Clin Spt Division


DATE 6 November 1980

CMT 1

/k/4-1384

The following is this facility's bed expansion capabilities without utilization of C wing space, moving DON or Podiatry Clinic, and evacuating Clinic Wing:

			BY CATEGORY:				
			Med	Surg	Ortho	Psych	Oral
B2	10	Med					
D2	10	Surg	10	33	34	25	17
A3	23	Surg	34	29	29		
B3	29	Surg	44	34	44		
B4	25	Psych	34	28	107		
A4	NA		122	124			
- A5	34	Med					
B5	32	Med (construction)					
A6	34	Ortho	Med	122			
B6	29	Ortho	Surg	124			
A7	34	Surg	Ortho	107			
B7	28	Surg	Psych	25			
A8	44	Med	Oral	17			
B8	34	Med					
A9	44	Ortho					
B9	17	Oral (no relocation Pod)	TOTAL	395			


 RICHARD F. HELMBOLD
 Major, MSC
 Chief, Clin Spt Div

CF:

C, PO&T

C, Inpnt/Ancil Br

C, DON



DEPARTMENT OF THE ARMY
HEADQUARTERS MARTIN ARMY COMMUNITY HOSPITAL
FORT BENNING, GEORGIA 31905

ATZB-MAH-S

19 November 1980

MINUTES PHYSICAL FACILITIES UTILIZATION AND LONG RANGE PLANNING REVIEW COMMITTEE

1. The Physical Facilities Utilization and Long Range Planning Review Committee met in the Headquarters Conference Room at 1500 hours on 19 November 1980 with COL L. K. Vann presiding.

2. Attendees were:

COL L. K. Vann, MSC (Chairman)	Executive Officer
COL Nicholas Khoury, MC	Chief, DPCCM
COL Melvin Butler, MC	Chief, Professional Services
COL Teryl Miller, ANC	Chief, Dept of Nursing
COL Joseph McDonald, MC	Chief, Dept of Surgery
LTC George Manning, MC	Chief, Family Practice
LTC Joseph Blatnica, MSC	Chief, Comptroller Division
MAJ Richard Helmbold, MSC	Chief, Clinical Support Division
CPT William Driggers, MSC	Chief, Plans, Operations, and Training
CPT James Hazelriggs, MSC	Chief, Ancillary Support Branch
CPT John Larson, MC	Family Practice
1LT Gregory Mulligan, MSC	Automation Management Officer
SFC Ronald Mahoney, <u>for</u>	Chief, Personnel Division

3. The first order of business was the report of the task force to the entire committee. (Incl 1) Each item was discussed and voted on as follows:

a. The number of beds required to adequately meet the peak workload requirements was discussed. (Incl 2) COL Miller made the motion to accept the task force's recommendations, COL Khoury seconded the motion, and it was carried unanimously.

b. Discussion was to move CMS storage to the kitchen on B-5 and then to the waiting area on B-2. COL Miller made the motion to approve the move, it was seconded by CPT Hazelriggs, and carried unanimously.

c. Discussion centered around moving the Red Cross Office from the dayroom area on B-8 to the TV repair room on C-8. Mr. McMahon is leaving and Miss Brewer will stay on at least one more year. Red Cross Office will be staffed primarily with volunteers. Moving these offices will give Red Cross two private offices plus the TV repair room. Logistics Division will be responsible for getting that room renovated. LTC Blatnica moved that this be accepted, COL Miller seconded, and it was carried unanimously. (The TV room will be moved to the kitchen area on the 8th floor.)

d. It was decided that a temporary solution for the sleeping/recreation area for the EMT's will be the area at the end of the Dermatology Clinic. A decision paper has gone forward to the Chief of Staff asking for the Fire Station at Sand Hill to be made available to the EMT's for this purpose. COL Khoury made a motion to accept this recommendation, LTC Manning seconded it, and it was carried unanimously.

ATZB-MAH-S

Minutes Physical Facilities Utilization and Long Range Planning Review Committee

e. The inpatient nursing area on the end of B9 was identified for sleeping rooms and a lounge area for the physician staff who must periodically stay overnight in the hospital. This will not interfere with the inpatient bed capability. COL Butler moved this be accepted, LTC Manning seconded it, and it was carried unanimously.

f. The utilization of Building 66 was discussed and it was referred back to the task force for further study and review.

g. The task force determined that no requirement exists to expand B4, and that having Personnel Division on the ninth floor does not interfere with the 395 bed capability plan. This was presented to the entire committee who voted to drop those two projects from the list.

4. The task force will meet again at 1500 hours on 24 November 1980.

5. The entire committee will meet at 1500 hours on 10 December 1980.

6. There being no further business at this time, the meeting was adjourned.

2 Incls
as



L. K. VANN
COL, MSC
Chairman

The following is this facility's bed expansion capabilities without utilization of C wing space, moving DON or Podiatry Clinic, and evacuating Clinic Wing:

B2	10	Med
D2	10	Surg
A3	23	Surg
B3	29	Surg
B4	25	Psych
A4	NA	
A5	34	Med
B5	32	Med (Construction)
A6	34	Ortho
B6	29	Ortho
A7	34	Surg
B7	28	Surg
A8	44	Med
B8	34	Med
A9	44	Ortho
B9	<u>17</u>	Oral (no relocation Pod)
	427	TOTAL

BY CATEGORY:

<u>Med</u>	<u>Surg</u>	<u>Ortho</u>	<u>Psych</u>	<u>Oral</u>
10	33	34	25	17
34	29	29		
44	34	<u>44</u>		
<u>34</u>	<u>28</u>	107		
122	124			
Med	122			
Surg	124			
Ortho	107			
Psych	25			
Oral	<u>17</u>			
SUB-TOTAL	395			
plus B5	<u>32</u>			
TOTAL	427			

APPENDIX G

STAFFING LEVELS BY GENERAL CATEGORIES,
FORT BENNING MEDICAL DEPARTMENT ACTIVITY, AS
OF 31 DECEMBER 1980

STAFFING LEVELS BY GENERAL CATEGORIES, FORT BENNING MEDICAL DEPARTMENT
ACTIVITY, 31 DECEMBER 1980

<u>CATEGORY OF STAFF</u>		<u>ASSIGNED PERSONNEL</u>	<u>PERCENTAGE</u>	
Officers/WO	252		18.2	
Officer		247		17.8
WO		5		.4
Enlisted	377		27.2	27.2
Civilian	758		54.7	
GS		632		45.6
		<u>126</u>		<u>9.1</u>
	1387	1387	100.0%	100.0%

APPENDIX H
STAFF QUESTIONNAIRE

You are being asked to take part in an anonymous, voluntary survey designed to study the policies and procedures involved in the relocation of work sites at this organization. The survey is designed to assist in developing a more comprehensive approach to the relocation of work sites.

Please answer all of the questions as openly and honestly as possible. Once finished, please fold the questionnaire in half, staple it and drop it in distribution. The last page contains the return address and will insure its return. Your candor and honesty are sincerely appreciated. Thank you for your attention and interest.

INSTRUCTIONS: Mark the appropriate answer(s) to the following questions. The questions include some fill in the blanks as well as essay. Be as brief or as extensive as you wish. The questionnaire is anonymous.

1. Since working here, how many relocations (Circle One) 0 1 2 3 4 5 have you been involved in? (Aside from when you changed jobs).

If you circled 0, then go to Question 14.

Answer Questions 2 thru 13 only about the latest relocation.

2. Were you consulted about the relocation prior to the move? _____ YES _____ NO

3. How much advance warning about the relocation did you receive?

Less than 1 Day _____ 2 Days to a Week _____ Over 2 Weeks _____
1 - 2 Days _____ Week to 2 Weeks _____

4. Why was your work site relocated?

- _____ 1. Construction Project.
- _____ 2. Creation of new function in my section.
- _____ 3. Expansion/curtailment of services in my section.
- _____ 4. Erection of new facility.
- _____ 5. To make room for other departments.
- _____ 6. Other.

5. Before the relocation my job performance was:

POOR
1

2

3

4

GOOD
5

6. The first week of the relocation my job performance was:

POOR
1

2

3

4

GOOD
5

H-2

7. One week after the relocation, my job performance was:
- | | | | | |
|-------------|---|---|---|-------------|
| <u>POOR</u> | | | | <u>GOOD</u> |
| <u>1</u> | 2 | 3 | 4 | <u>5</u> |
8. Two week after the relocation, my job performance was:
- | | | | | |
|-------------|---|---|---|-------------|
| <u>POOR</u> | | | | <u>GOOD</u> |
| <u>1</u> | 2 | 3 | 4 | <u>5</u> |
9. One month after the relocation, my job performance was:
- | | | | | |
|-------------|---|---|---|-------------|
| <u>POOR</u> | | | | <u>GOOD</u> |
| <u>1</u> | 2 | 3 | 4 | <u>5</u> |
10. How well was the relocation planned?
- | | | | | |
|-------------|---|---|---|-------------|
| <u>POOR</u> | | | | <u>GOOD</u> |
| <u>1</u> | 2 | 3 | 4 | <u>5</u> |
11. How long did it take your section to return to the same level of efficiency after the relocation?
- | | | |
|--------------------------------|------------------------------|-----------------------------------|
| <u> </u> Immediately. | <u> </u> 1 Week. | <u> </u> One Month. |
| <u> </u> One Day. | <u> </u> 2 Weeks. | <u> </u> Several Months. |
| <u> </u> 2 to 3 Days. | <u> </u> 3-4 Weeks. | |
12. The new work site improved the efficiency of my section:
- | | | | | |
|-----------------|---|---|---|-----------------|
| <u>STRONGLY</u> | | | | <u>STRONGLY</u> |
| <u>DISAGREE</u> | | | | <u>AGREE</u> |
| <u>1</u> | 2 | 3 | 4 | <u>5</u> |
13. The relocation of the work site was necessary:
- | | | | | |
|-----------------|---|---|---|-----------------|
| <u>STRONGLY</u> | | | | <u>STRONGLY</u> |
| <u>DISAGREE</u> | | | | <u>AGREE</u> |
| <u>1</u> | 2 | 3 | 4 | <u>5</u> |
14. To the best of your knowledge, how many times has the section where you are now working been relocated in the past:
- | |
|-----------------------------|
| <u> </u> 1 Year. |
| <u> </u> 3 Years. |
| <u> </u> 5 Years. |
| <u> </u> 10 Years. |

15. Could you suggest a method to more properly plan and execute relocation?

16. Do you have any recommendations on how space should be allocated in this organization?

17. I am _____ Military _____ Civilian.

18. My grade/rank is:

GS: _____ WG: _____ Enl: _____ Off: _____

19. I have served at this organization for _____ years (or _____ months.

20. I work in the _____ Section (PAD, Dept of Nursing, Surgical Clinic, Comptroller, etc.).

21. ADDITIONAL COMMENTS: _____

APPENDIX I
DELPHI I AND II

4 February 1981

You are being asked to participate in a survey which is a portion of a study concerning the utilization of available floor space in uniformed services medical treatment facilities. The goal of this study is to develop an optimal feasible model for the allocation of floor space.

Your participation in this study focuses upon your personal views on how space should be managed. The views are not limited to how this is being accomplished at your present assignment.

Survey Methodology

The methodology of this survey is the Delphi technique. The Delphi is a survey process in which its participants are a panel of experts with both extensive theoretical knowledge and commensurate experience in the field being researched. The process is characterized by multiple iterations of a similar question(s) which solicit the participant's esteemed opinion. Panel members may freely revise their positions at each iteration, based upon their evaluation of a summary of all participants' opinions provided at the start of each iteration. Following the initial questionnaire, panel members will remain anonymous as one of the prime reasons for this approach is to encourage the likelihood of frank responses. In the first round, we encourage the generation of additional issues which significantly impact upon the central question.

Background

The uniformed services health care delivery system is both paralleled to and yet unique from its civilian counterpart. One dissimilar area is the flexibility of the civilian hospital to expand through construction.

In the military, there is usually no shortage of real estate. The development of the real estate, specifically the construction of new facilities, is a seemingly unsurmountable task. Because of the restrictions on new construction, the military health care manager is faced with an obligation to properly allocate an ever shrinking amount of floor space to satisfy an ever increasing demand. The phenomena of shrinking usable floor space is widespread. The facilities of Fort Polk, Fort Stewart, and Fort Carson are examples of facilities long made obsolete by the changes of time. By the same token, some of our "newer" facilities such as the chassis hospitals at Fort Bragg and Fort Benning were planned and built in

the 1950's yet have been modified to house 1980's technology. Additions of clinic wings and other add-on areas have slowed the obsolescence process, but even the space provided by these construction projects is being rapidly expended.

Solutions to the problems of space are as numerous and diverse as their authors. With your assistance, perhaps the problem of space utilization can be controlled.

INSTRUCTIONS:

Please answer the following questions in a few words, a few verses or in a torrent of lityny, as you see fit. Controversy or conservatism is accepted equally. Write on the front, back or additional pages as you see fit.

When completed, please place the sheets, unsigned, in the inclosed, self-addressed envelope.

Thank you for your participation.

I-3

1. Is space utilization a problem in itself or a symptom of a larger problem?

I-4

2. What major phenomena in the delivery of health care will affect the availability of space, positively or negatively, over the next five years?

I-5

3. Is space allocated properly in your hospital?

I-6

4. What, to you, is the best method of space allocation?

5. Space utilization, like strategic planning, is a function of a number of factors. Listed below are some of those factors. Are there factors missing? Can you suggest some which need to be added or deleted?

Space Utilization is a function of --

- Technology.
- Political considerations.
- Type of services.
- Mix of services.
- Age of building.

25 February 1981

Thank you for taking part in the first iteration of the Delphi study. Only a few of the members did not initially respond. Since the study is confidential and anonymous, everyone has an equal chance to provide input into the succeeding iterations.

When you have completed the study, please fold it in half, staple it, and drop it in distribution. It will be returned to the appropriate office automatically.

The members of the Delphi were surprisingly synonymous in their expressed opinions. By an overwhelming majority, they felt that space utilization was not a problem in itself, rather it was a reflection of a greater problem, that of long range planning. Several members of the Delphi stated a need for a written long range plan. Nearly unanimous was the feeling that the best method of management for space utilization was through a multidisciplinary committee. Several group members pointed to the recently revitalized Physical Facilities Utilization and Long Range Planning Committee (PFU/LRPC) as a positive step.

One of the suggestions voiced by a few of the Delphi participants was to formulate the PFU/LRPC similar to the Program Budget Advisory Committee (PBAC). A synthesis of the recommendations for management of space through the use of a committee included the following steps to be followed:

1. Analyze the space needs of this hospital from a zero-based system, similar to zero-based budgeting.
2. Prioritize the identified needs of the hospital based on:
 - a. Present mission.
 - b. "Absolute" space requirements.
 - c. Available resources (personnel and material).
 - d. Patient requirements and demands.
 - e. State-of-art requirements, present and future.
 - f. Possible future missions (ARD season, mobilization).
3. Develop and analyze alternatives.
4. Select the best alternative(s).
5. Recommendations to the Commander.

Below are the stated purpose and functions of the two committees taken from MEDDAC Regulation 15-1.

PHYSICAL FACILITIES UTILIZATION AND LONG RANGE PLANNING COMMITTEE

PURPOSE/FUNCTIONS: To identify physical facility resources and recommend to the Commander ways of using those resources efficiently and effectively in view of continuing construction programs. To formulate intermediate (2-5 year frame), long-range (5 year plus frame) goals and objectives of a broad nature, projecting major future requirements reference construction (new construction renovation, expansion, closure), manpower, equipment, and services, to conduct and analyze demographic studies, developing trend projections with respect to the population served and the potential impact of such trends on medical services rendered.

PROGRAM BUDGET ADVISORY COMMITTEE

PURPOSE: To formulate recommendations relative to the management of capital resources, to include the aspects of planning and programming for, budgeting for, determining allocation/procurement priorities for, and the developing of guidelines relative to capital equipment and its acquisition.

FUNCTIONS: Essential functions of the PBAC are:

- a. To interpret program-budget guidance from Health Services Command and to integrate the local commander's guidance.
- b. To achieve a reasonable balance and coordination between missions, activities and available resources.
- c. To present a balanced, staff-coordinated command operating budget (COB) to the MEDDAC Commander.
- d. To review reports of program-budget executive and to prepare recommendations for revisions to the COB based on the results of operations.
- e. To evaluate requirements, establish and recommend equipment purchase priorities for all capital equipment.

QUESTIONS:

1. After examination of the PFU/LRPC and the PBAC purpose and function:
 - a. Are the two similar enough to allow the PFU/LRPC to parallel the PBAC?
 - b. What needs to be done to improve the PFU/LRPC?
 - c. Who should chair the committee?
 - d. Once the recommendations have been made, what staff agency or committee should be tasked with responsibility to see that the decisions are executed properly?

2. What should be included in a Long Range Planning document and who should be tasked with developing it?

3. What criteria should be utilized by the PFU/LRPC in determining the space needs of a department requesting more space?

APPENDIX J

RESULTS OF RANDOM SAMPLE
STAFF QUESTIONNAIRE

DATA RECAPITULATION - SURVEY QUESTIONNAIRE

SUBJECT

1. How many relocations?

	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5 or More</u>	<u>Total</u>
Frequency	10	9	9	2	5	3	38
Percent	26.3	23.7	23.7	5.3	13.2	7.9	100.1%

2. Were you consulted?

	<u>YES</u>	<u>NO</u>	<u>TOTAL</u>
Frequency	17	11	28
Percent	61%	39%	100%

3. Advance notice in days?

	<u>/D</u>	<u>1-2D</u>	<u>2-7D</u>	<u>7-14D</u>	<u>14D</u>	<u>Total</u>
Frequency	2	5	3	5	13	28
Percent	7.1	17.9	10.7	17.9	46.4	100

x = 9.3 days

4. Why were you relocated?

	<u>Construc- tion</u>	<u>New Function</u>	<u>Exp/Curtail Services</u>	<u>New Facility</u>	<u>Make Room for Others</u>	<u>Other</u>	<u>Total</u>
Frequency	9	3	3	3	10	8	36
Percent	25	8.3	8.3	8.3	27.8	22.2	99.9

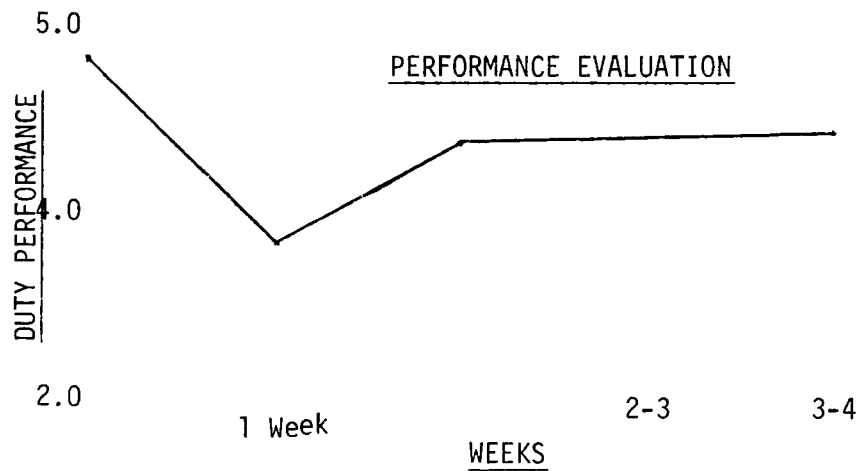
J-2

5 through 9. Job performance?

	<u>Before</u>	<u>First Week</u>	<u>Week After</u>	<u>Two Weeks</u>	<u>One Month</u>
	5	6	7	8	9
x =	4.81	3.81	4.37	4.44	4.52

* Mean values based on n = 28 were:

<u>Poor</u>					<u>Good</u>
1	2	3	4	5	



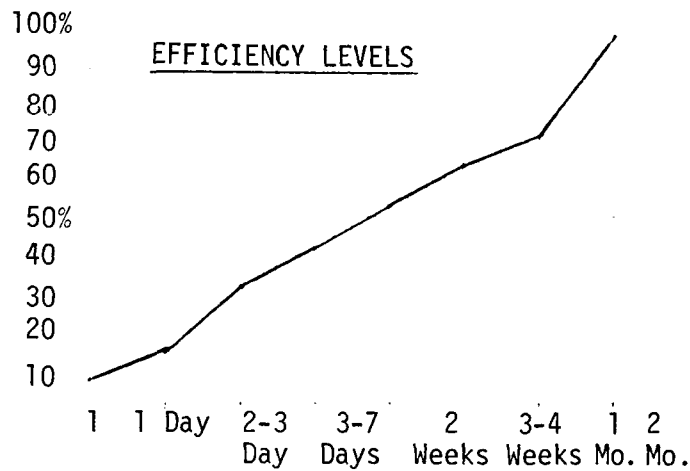
10. How well planned?

	<u>Poor</u>				<u>Good</u>	<u>Total</u>
	1	2	3	4	5	
Frequency	6	9	5	1	7	28
Percent	21.4	32.1	17.9	3.6	25.0	100

$$x = 2.78$$

11. How long for section to return to same level of efficiency?

	<u>Immedi- ately</u> 2	<u>1 Day</u> 2	<u>2-3 Days</u> 5	<u>3-7 Days</u> 3	<u>2 Weeks</u> 3	<u>3-4 Weeks</u> 3	<u>Month</u> 2	<u>Month</u> 8	<u>Totals</u> 28
Frequency									
Percent	7.1	7.1	17.9	10.7	10.7	10.7	7.1	28.6	99.9
Cumulative Frequency Percent	7.1	14.2	32.1	42.8	53.5	64.2	71.3	99.9	



12. Improve efficiency?

	<u>Strongly Disagree</u> 1	<u>2</u>	<u>3</u>	<u>4</u>	<u>Strongly Agree</u> 5	<u>Total</u>
Frequency	14	3	2	5	4	28
Percent	50	10.7	7.1	17.9	14.3	100

$$x = 2.36$$

13. Relocation necessary:

	<u>Strongly Disagree</u> 1	<u>2</u>	<u>3</u>	<u>4</u>	<u>Strongly Agree</u> 5	<u>Total</u>
Frequency	7	4	5	4	8	28
Percent	25.0	14.3	17.9	14.3	28.6	100.1

$$x = 3.32$$

14. Eliminated due to ambiguity.

15. Included as narrative at end of this section.

16. Included as narrative at end of this section.

17 and 18. Demographics (Optional, 28 responded).

	<u>Replies</u>		<u>Percentage</u>	
Military	18		64.3	
Officer/WO		14		50
Enlisted		4		14.3
Civilian	10		35.7	
GS		10		
WG	—	<u>0</u>	—	<u>35.7</u>
	28	28	100.0	100.0

19. Service with Martin Army Community Hospital: Eliminated due to ambiguity.

15. Could you suggest a method to more properly plan and execute relocations?

- Stop crisis management.
- Do feasibility studies first.
- Include affected areas in planning.
- Phase sections in and out, completing upgrades between moves.
- Offer more than one alternative.
- Let the staff who are paid to think, plan the move, leave clerks out.
- Give advanced warning.
- Allow input into planning before decisions are made.
- Colocate Admin Wing via new construction.
- Affect Long Range Planning.
- Return the function of space management to the Mangement Branch of the Comptroller Division.
- Less preference to seniority and more to performance.
- Employ a Facilities Coordinator.
- Look a little further into the future than next week.
- We need more workers and less thinkers.
- Every time the hospital gets a new admin resident, sections start moving.

16. Do you have any recommendations on how space should be allocated in this organization?

- Present the study to the Executive Committee.
- Allocate space to direct patient care areas first.
- Identify the needs of the individual job requirements.
- Identify traffic flow.
- Keep office space in patient areas to a minimum.
- Identify noise factors.
- Allocate space by workload, number of providers, storage space requirements.
- Involve the space utilization committee.
- Patient care has first priority.
- Admin and staff on first floor.
- Keep clinics on first floor.

21. Additional Comments:

- Eliminate Sacred Cows.
- Move many admin functions out of Building 9200.
- Commander has to have final decision.

APPENDIX K
RESULTS OF DELPHI

1. Make the Physical Facilities Utilization and Long Range Planning Committee an operational committee tasked with assuming a more aggressive role in the management of the physical facilities and the development of a long range plan. Specific actions recommended by the Delphi group include:

- a. Identification and development of the roles and functions of the committee.
- b. Development of a long range plan, including alternatives and options for the future, with one, three and five-year goals.
- c. Development of a short range plan (one year) including annual goals.
- d. Development of a procedural mechanism for requesting changes to physical facility utilization.
- e. Restrict membership of the committee as is, however, maintain an ad hoc task force to develop the roles, functions, plans and goals for presentation to the entire committee.
- f. Chairmanship of the committee should pass to the Chief of Administrative Services.
- g. Identify a responsible individual with the task of assembling and writing the source documents for the committee (long range, short range plans, etc.).

2. Contents of a long range plan should include:
 - a. Mission of the hospital.
 - b. Annual command goals (one year).
 - c. Intermediate goals (three years).
 - d. Long range goals (5+ years).
3. Each goal should include:
 - a. Priorities of goals.
 - b. Construction projects.
 - c. Renovation projects.
 - d. Mix of services.
 - e. Anticipated workload.
 - f. Required studies.
 - g. Problems anticipated.
 - h. Alternatives and options.
 - i. Tasking by department for execution of goals.

K-3

Procedure:

1. Initiate request. Staff Study
2. Staff request - include Comptroller.
3. Present to committee.
4. Committee determines need, effects on long range plans.
5. Recommends to Executive Committee.

APPENDIX L

STATISTICAL DATA 1937-1980
FORT BENNING, GEORGIA

AD-A195 186

A STUDY TO DESIGN A FUNCTIONAL SPACE UTILIZATION
PROGRAM FOR IMPLEMENTATION (U) ARMY HEALTH CARE STUDIES
AND CLINICAL INVESTIGATION ACTIVITY F. D. J. BRUSS

373

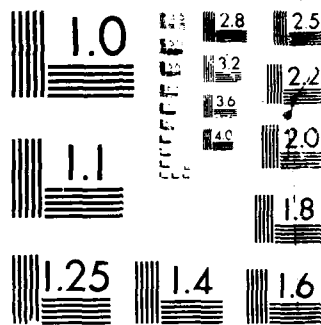
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

STATISTICAL DATA 1937-1980
FORT BENNING, GEORGIA

<u>YEAR</u>	<u>INPATIENT DAYS</u>	<u>OUTPATIENT VISITS</u>	<u>RATIO OP/IP</u>	<u>$\frac{1}{\text{TROOP}}$ STRENGTH</u>
1937	77,745	46,131	.59	6,184
1938	73,365	43,635	.59	6,327
1939	74,127	58,174	.78	22,500
1940	185,375	64,692	.35	47,500
1941	407,514	65,207	.16	56,000
1942	499,619	150,830	.30	70,000
1943	612,450	319,830	.52	75,000
1944				80,000
1945	670,301	252,696	.38	60,000
1946	251,519	92,717	.37	18,144
1947	124,900	105,138	.84	12,346
1948	96,613	101,531	1.05	14,367
1949	88,101	150,737	1.71	24,783
1950	92,283	146,649	1.59	26,944
1951	288,294	303,338	1.37	34,321
1952	324,639	330,587	1.24	26,071
1953	255,078	296,727	1.16	24,842
1954	210,505	322,330	1.53	40,217
1955	160,475	339,227	2.11	32,808

L-2

<u>YEAR</u>	<u>INPATIENT DAYS</u>	<u>OUTPATIENT VISITS</u>	<u>RATIO OP/IP</u>	<u>TROOP STRENGTH</u>
1956	170,675	332,639	1.95	33,946
1957	179,135	338,172	1.89	35,643
1958	135,468	297,319	2.23	27,182
1959	139,297	329,108	2.36	31,008
1960	143,603	339,131	2.36	26,912
1961	138,064	382,963	2.77	31,077
1962	142,102	447,952	3.14	36,148
1963	167,438	500,733	3.44	43,839
1964	167,787	590,338	3.51	44,758
1965	142,901	727,090	5.09	44,541
1966	173,527	671,387	3.87	47,030
1967	247,323	882,554	3.57	51,533
1968	243,557	906,856	3.72	48,015
1969	223,356	862,631	3.86	47,015
1970	203,753	842,367	4.13	39,869
1971	142,997	738,445	5.16	29,269
1972	111,443	752,810	6.76	21,590
1973	82,059	607,254	7.40	18,900
1974	82,178	658,708	8.02	18,535
1975	67,192	601,581	8.95	18,008
1976	67,519	641,126	9.50	17,860

L-3

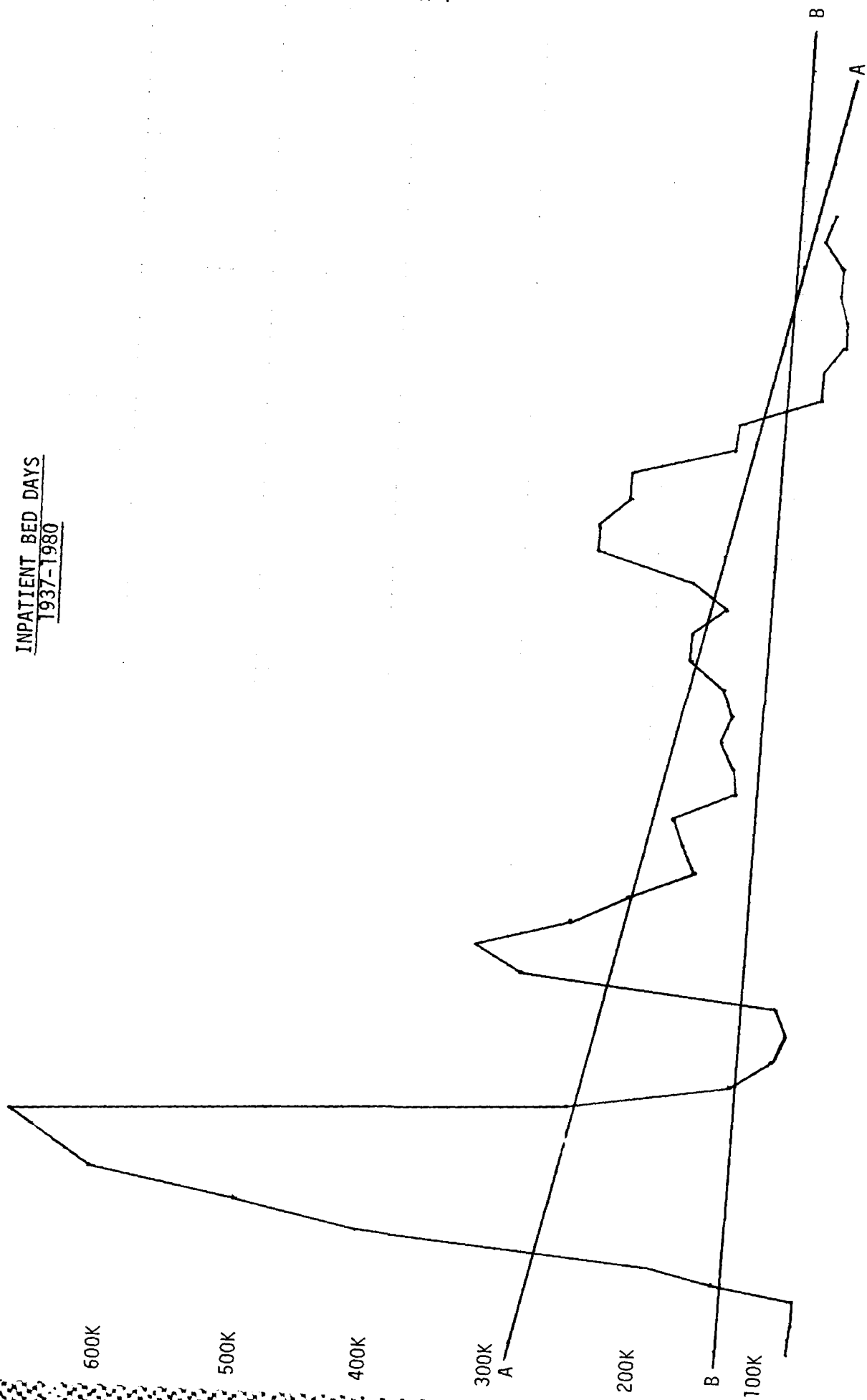
<u>YEAR</u>	<u>INPATIENT DAYS</u>	<u>OUTPATIENT VISITS</u>	<u>RATIO OP/IP</u>	<u>TROOP STRENGTH</u>
1977	73,123	647,773	8.86	27,309
1978	71,774	593,443	8.85	20,266
1979	81,156	647,459	8.27	22,196
1980	78,195	643,543	8.23	23,125

¹Source: Directorate of Resources Management, United States Army
Infantry Center, Fort Benning, Georgia 31905.

APPENDIX M

GRAPHS

INPATIENT BED DAYS
1937-1980



1937 1942 1947 1952 1957 1962 1967 1972 1977 1980

FIGURE M-1

OUTPATIENT VISITS
1937-1980

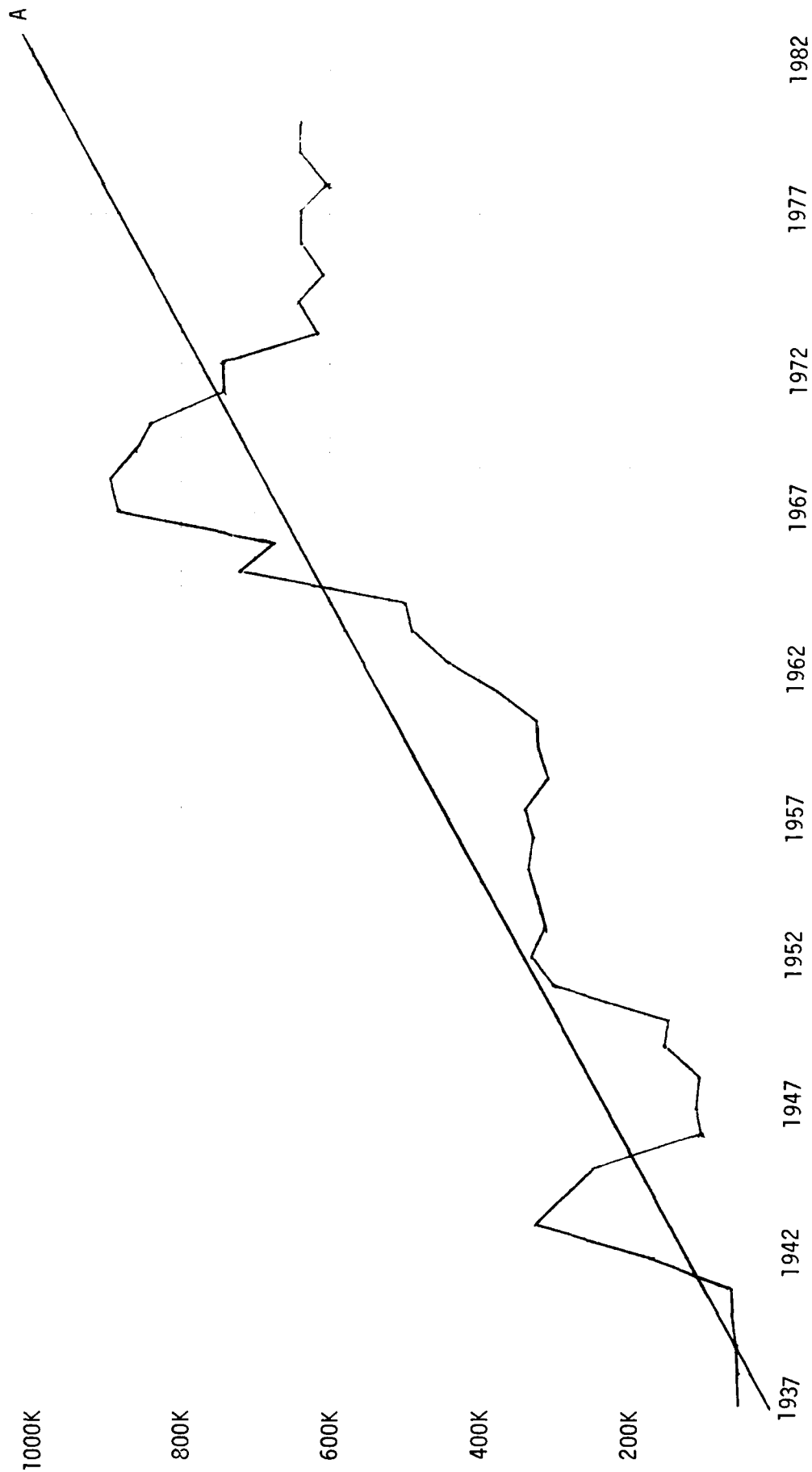


FIGURE M-2

OUTPATIENT VISITS
LESS 1942-45, 1951-52, 1962-72

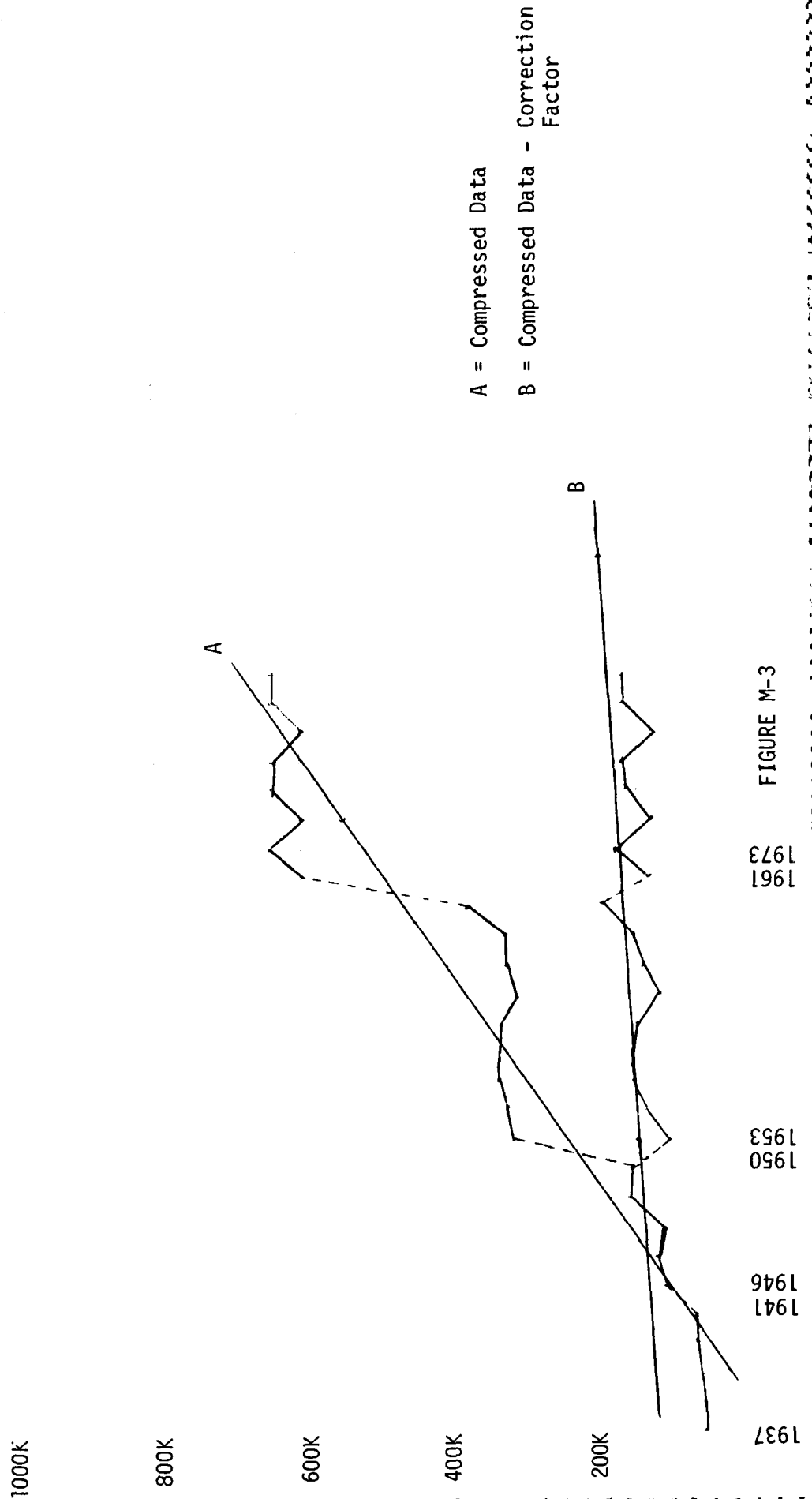


FIGURE M-3

OUTPATIENT VISITS
1937-1980

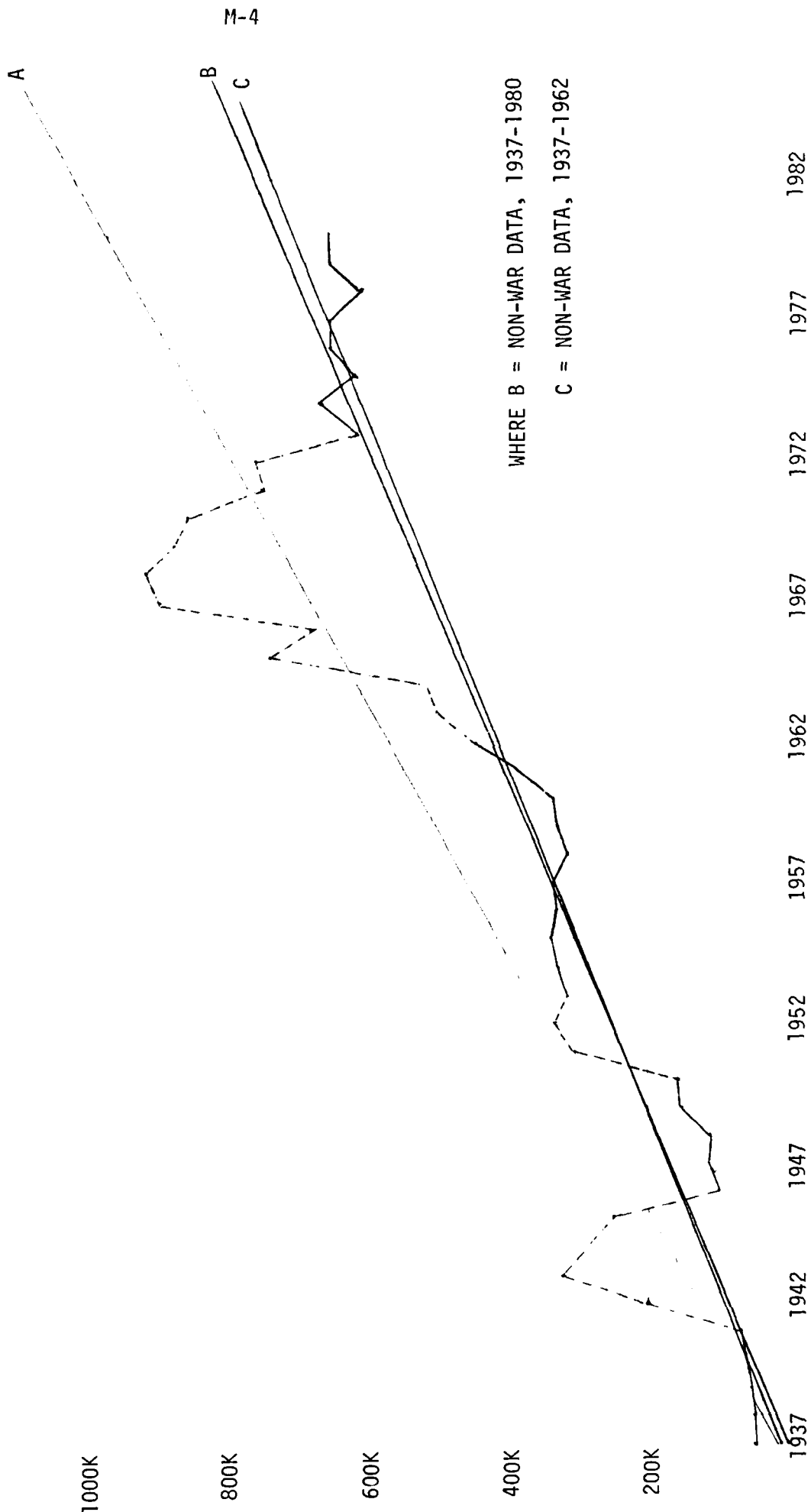


FIGURE M-4

RATIO OF OUTPATIENT VISITS
TO
INPATIENT DAYS
1937-1980

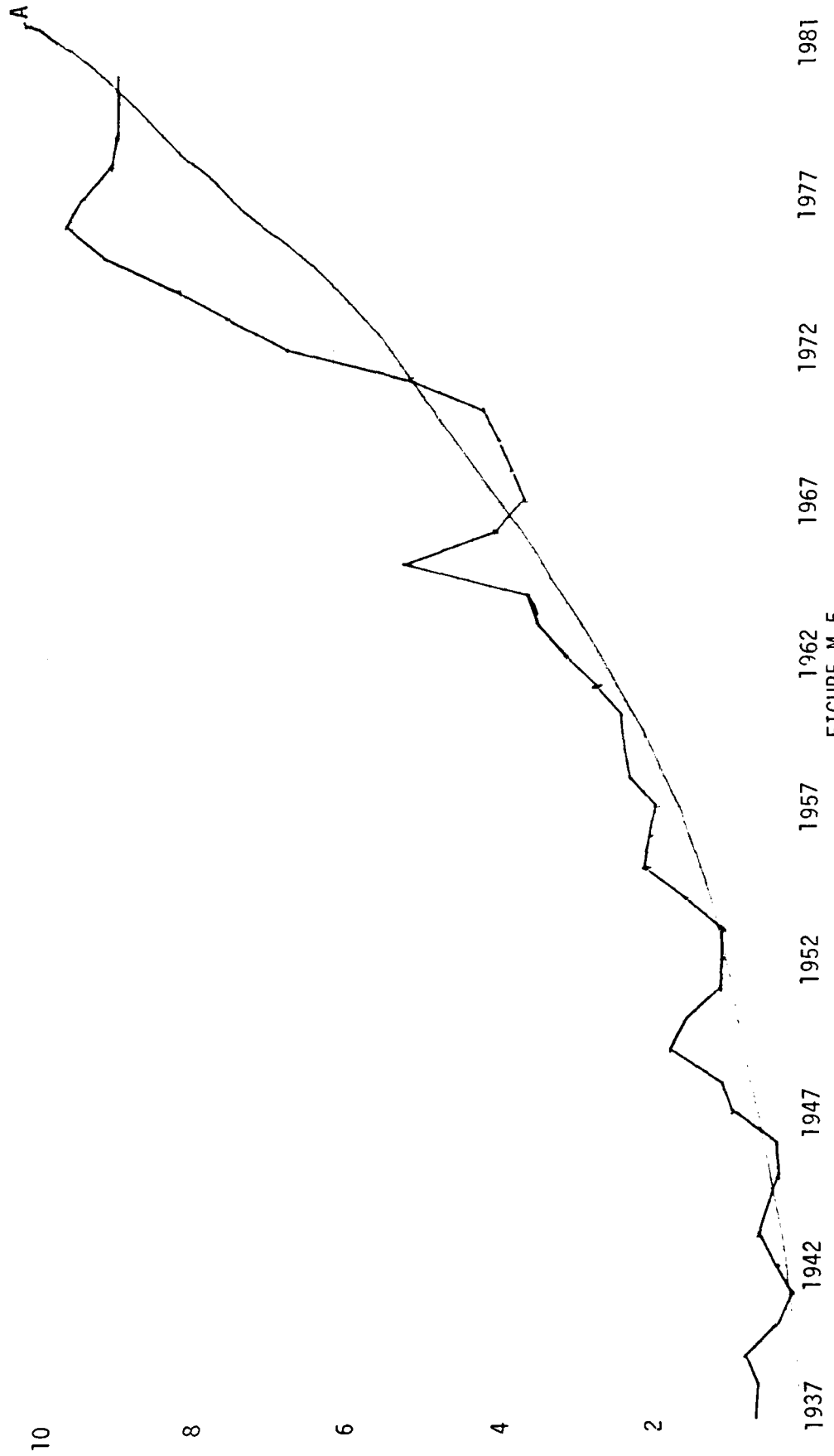


FIGURE M-5

APPENDIX N

NON-WAR OUTPATIENT CLINIC VISITS
WITH CORRECTION FACTORS

CUMULATIVE NON-WAR OUTPATIENT
CLINIC VISITS WITH CORRECTION FACTOR

<u>YEAR</u>	<u>ACTUAL</u>	<u>CORRECTION FACTOR</u> (Base Year 1950)
1937	46,131	
1938	43,635	
1939	58,174	
1940	64,692	
1941	65,207	
1946	92,717	
1947	105,138	
1948	101,531	
1949	150,737	
1950	146,649	CF = 184,197
1953	296,727	112,530
1954	323,330	139,133
1955	339,227	155,030
1956	339,639	155,442
1957	338,172	153,975
1958	297,319	113,122
1959	329,108	144,911
1960	339,132	154,935

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<u>YEAR</u>	<u>ACTUAL</u>	<u>CORRECTION FACTOR</u> (Base Year 1950)
1961	382,936	198,766
		$CF_2 = 483,461$
1973	607,254	123,793
1974	658,708	175,247
1975	601,581	118,120
1976	641,126	157,665
1977	647,773	164,312
1978	593,443	109,982
1979	647,459	163,998
1980	643,543	160,082

APPENDIX O

RECOMMENDED FORMAT FOR
ESTABLISHMENT OF PROPER MECHANISMS FOR THE
UTILIZATION OF PHYSICAL SPACE

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY MEDICAL DEPARTMENT ACTIVITY
Fort Benning, Georgia 31905

MACH REGULATION
NUMBER

UTILIZATION OF PHYSICAL SPACE

1. Purpose. The purpose of this regulation is to establish policies and procedures relating to the efficient utilization of physical space.

2. General.

a. It is necessary that procedures be established that permit the efficient utilization of the total physical facilities available. Each request for relocation, expansion, or major modification of an activity will be thoroughly evaluated before a recommendation for action is made.

b. Relocation or expansion will not be effected until approved by the Executive Officer.

c. Request to relocate, expand or modify an existing activity should consider carefully the following criteria:

- (1) Improved patient care.
- (2) Reduced cost of operation.
- (3) Reduced personnel requirements.
- (4) Increased productivity.

d. Chiefs of Departments, Divisions or separate services are encouraged to give added consideration to changes within their area of responsibility which do not require a work order. However, improvement of operation should be the overriding criteria.

e. MCA projects cannot be modified or altered for one year from the completion date of the project.

3. Responsibilities:

a. The Comptroller will be responsible for the following:

(1) Providing overall management advice and assistance to Department, Division, separate Service and activity chiefs regarding utilization of physical space.

(2) Keeping current records and diagrams of space allocation and monitoring

assignment of physical space.

(3) Determining whether the requested relocation, expansion, or modifications meet the following criteria:

- (a) Will the proposed relocation improve operations?
- (b) Is the improvement justified by the cost?
- (c) Does the proposal comply with both short and long range objectives?

b. Chief, Logistics Division will be responsible for the following:

- (1) Performing required reviews of the proposal.
- (2) Coordinating alteration or modification that may be required to effect the change of allocation.
- (3) Arranging for installation of telephones and special equipment as required.
- (4) Arranging for janitorial coverage of the area involved, if applicable.

(5) Furnishing necessary details and transportation for moves.

(6) Maintaining current modification projects productivity list.

c. Chiefs of Departments, Divisions, separate Services or activities will be responsible for the following:

(1) A thorough evaluation of the alternatives available to accomplish the end result of the proposed project.

(2) Preparing a complete statement of impact of the project in their area of responsibility. A sample of the statement is shown in Appendix H.

(3) Preparing a rough draft and/or diagrams as required.

(4) Initiation of the appropriate administrative requirements (i.e., requests for action).

(5) Coordinating with the Chief, Professional Services for those matters relating directly to patient care.

d. The Physical Facilities Utilization and Long Range Planning Committee will insure that the requests are in consonance with the long range plan.

e. Executive Officer, MEDDAC will:

(1) Approve all relocation, expansion and major modification requests.

(2) Establish priorities for all relocation, expansion and major modification requests.

4. Procedures:

a. Chiefs of Departments, Divisions or separate Services desiring to relocate, modify or expand their activity will prepare a brief disposition form to the Comptroller with justification for the relocation, modification or expansion to include the following:

(1) Reason or purpose of proposed change.

(2) Description of proposed change with diagram if appropriate.

(3) Requirements for alterations or modifications to include special electrical requirements giving location (220 volt outlets, additional 110 volt outlets.)

(4) Telephone requirements (changes, locations, numbers, etc.). If additional telephones are required, a complete list of numbers in use in the activity concerned will be included giving the title of the user.

(5) Changes in signage requirements.

b. The Comptroller will conduct necessary analyses and insure complete staff coordination. The analysis and original request will be forwarded to the Chief, Logistics for his review and comments.

c. The Chief, Logistics Division will make the appropriate review and return comments by indorsement to the Comptroller.

d. The Comptroller will consolidate all comments, and present the request, comments and a final recommendation to the Physical Facilities Utilization and Long Range Planning Committee (PFU/LRPC).

e. The PFU/LRPC will review the packet and will insure that the requested actions are in consonance with the long range plans. The

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committee chairman will note the findings of the committee and forward the packet to the Executive Officer.

The proponent of this regulation is the Comptroller. Users are invited to send comments and suggested improvements to the Commander, ATTN: ATZB-MA.

FOR THE COMMANDER:

EDUARDO GUERRERO
CPT, MSC
Adjutant

DISTRIBUTION
A

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SUBJECT: Reallocation of Physical Space

TO: Comptroller

FROM: Department
Requesting Space

1. Proposal: (Spelled out in detail exactly what the department wishes to do.).
2. Justification: (Demonstrated need for additional space must clearly show an increase in efficiency or effectiveness.)
 - a. Mission of department requesting change.
 - b. Staffing levels and changes to staffing.
 - c. Production/workload levels and changes.
 - d. Special work environment requirements:
 - New equipment.
 - Added functions.
 - e. Benefits to patient care.
 - f. Logistical actions required in event of approval:
 - Telephones.
 - Construction/Redesign Requirements.
 - Vehicle/Labor Requirements.
 - g. Time involved in affecting such a move.
 - h. Estimated cost of such a move.
3. Identification of all other sections affected by the recommended move.
 - a. Effects of such a move on efficiency of other sections.
 - b. Relocation requirements of other sections.
 - c. Effects on patient care in other sections.
4. Point of Contact for action.

Incl - Rough Draft and/or Diagrams as (Signature of Section/Department Chief)
required.

END

DATE

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